





WILLIAM VAUGHAN, ESQUIRE.

From a Bust by Sir Francis Chantrey. 1811
in the possession of Daniel Alexander Esq^r

MEMOIR

OF

WILLIAM VAUGHAN, Esq. F.R.S.

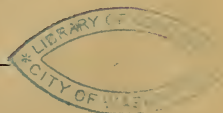
WITH

MISCELLANEOUS PIECES

RELATIVE TO

DOCKS, COMMERCE, ETC.

Nisi utile est quod facimus, stulta est gloria.



LONDON:
SMITH, ELDER, & CO., 65, CORNHILL.

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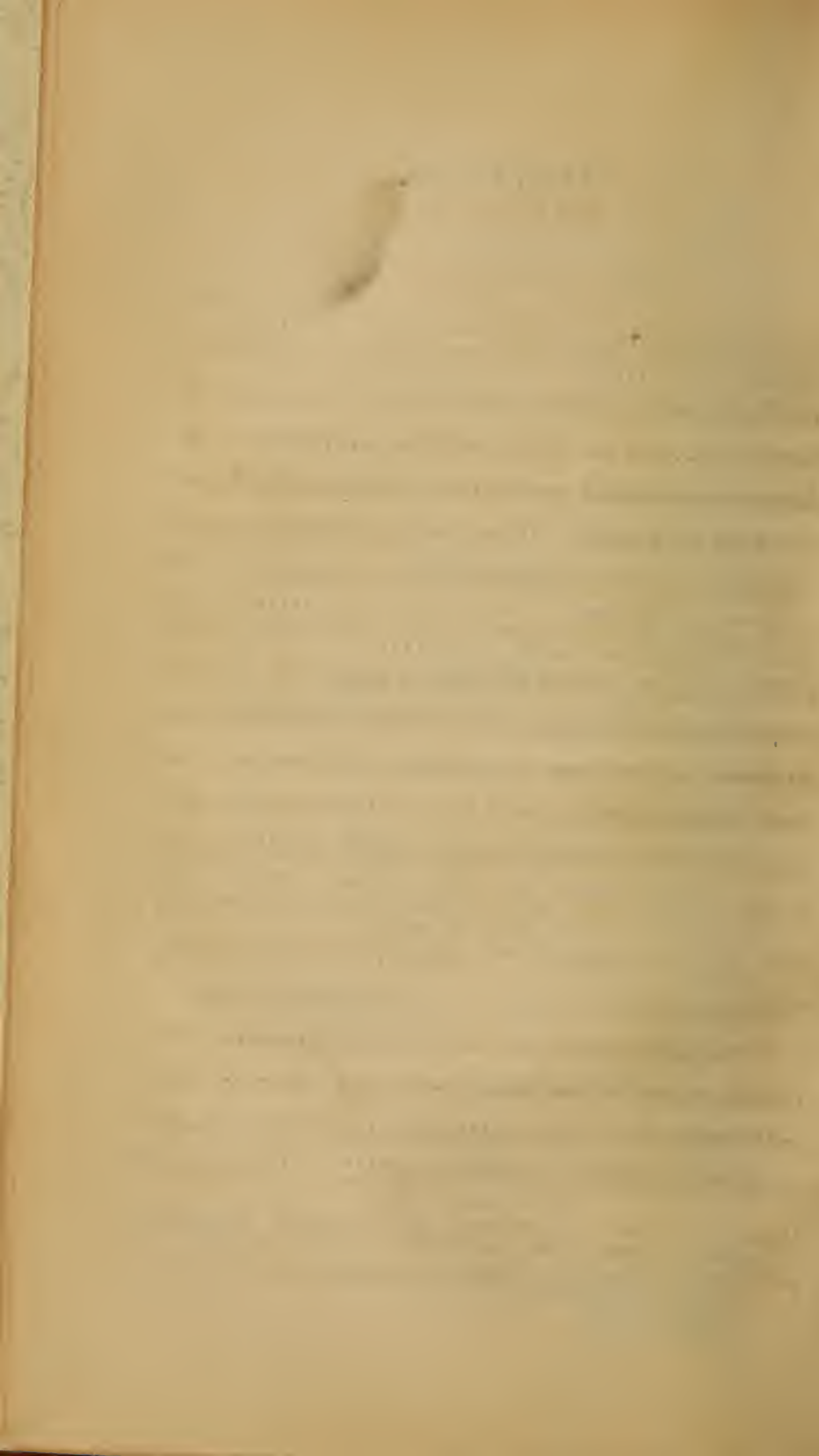
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Reasons in favour of the London Docks, printed in 1795, and
reprinted in 1796 and 1797.



PREFACE.

BETWEEN the years 1793 and 1800, I wrote and printed several Tracts on Docks, with Hints on Commerce, and on other subjects, to promote the formation of Docks and other accommodations for the Port of London. They were generally circulated, but were not designed for publication.

As many of these objects have been long completed, and as copies of some of these tracts still remain on hand, it may not be thought uninteresting to make as complete a collection of them as can now be accomplished, and they will be found in the Appendix. Some few of the smaller tracts relating to the Docks being out of print, and being at this time of little value, it has not been thought worth while to reprint them.

Having had some leisure, and wishing to make myself useful to society, I associated early in life with some of those Committees whose objects were congenial with my own feelings, and as many of them had been sanctioned and adopted by the public, they floated down the stream of time by

their own merits, and those who voluntarily tendered their services found their labours amply repaid by their success.

These views and pursuits induced me to procure from Captain Woodward a Narrative of his sufferings at Celebes (which is noticed in the Memoir, page 9), and which I published with an Introduction and an Appendix, containing many well-authenticated details of escapes from shipwrecks under great hardships; shewing the importance of discipline, union, confidence, and perseverance in the midst of scenes of danger, distress, and abstinence.*

The Memoir, Introduction, and Miscellaneous Part, with some few exceptions, were written within the last two years, and under great disadvantages, as I have been obliged to employ an amanuensis, owing to an imperfection in my sight.

I am indebted to my friend Mr. Alexander for proposing as a frontispiece a sketch drawn by his son, the Rev. D. Alexander, from my bust in his possession, executed by Sir F. Chantrey in the year 1811. I take this opportunity of thanking him for his kindness; and though it is the fashion

* A few copies of this work may still be had of Messrs. Smith, Elder, & Co. 65, Cornhill.

in these times for authors to give their own likenesses as an introduction to their works, yet as they often outlive them, I wish to build my hopes on a surer foundation, by presuming to present this little collection with diffidence to the public, relying on their kindness and candour for its favourable reception.

The Introduction and Miscellaneous Parts to this little collection may be deemed rather as sketches or observations on events that have risen out of the temper and spirit of the times we live in, than as a history or memoir of a private individual; and if they should prove interesting and useful to others, my great objects will be accomplished.

The Introduction and Miscellaneous Part of these little Tracts having been printed off, it is too late to do otherwise than insert the following excellent sentiments of Mr. Justice Park, extracted from the "National Gazette," published at Philadelphia, 22d February, 1839, which has just been received, and is as follows:—"The late eminent Judge, " Sir Allan Park, once said at a public meeting in " the City of London,—' We live in the midst of " ' blessings till we are utterly insensible of their

“ ‘ greatness and of the source from which they
“ ‘ flow. We speak of our civilization, our arts,
“ ‘ our freedom, our laws, and forget how large a
“ ‘ share of all is due to Christianity. Blot Chris-
“ ‘ tianity out of the page of man’s history, and
“ ‘ what would his laws have been, what his civili-
“ ‘ zation? Christianity is mixed up with our very
“ ‘ being and our daily life ; there is not a familiar
“ ‘ object around us which does not wear a different
“ ‘ aspect because the light of Christian hope is on
“ ‘ it. Not a law which does not owe its truth and
“ ‘ gentleness to Christianity ; not a custom which
“ ‘ cannot be traced in all its holy and healthful
“ ‘ parts to the Gospel.’ ”

If it had been seen in time, this interesting paragraph would have naturally appeared at page 126 of the Miscellaneous Part, where the introduction of Christianity is stated to have contributed so largely to the religious and moral improvement and happiness of society.

These admirable sentiments of the late Sir Allan Park require no comment, as they speak for themselves.

WILLIAM VAUGHAN.

London, 4th April, 1839.

INTRODUCTION.

WHEN a man has entered the eighty-seventh year of his age, it is time for him to revert to events that have passed ; and to put his house in order, preparatory to his going hence to be no more in this staté of probation.

Under the warning admonitions of age, the following suggestions present themselves ;—That men ought to value life more from its importance and utility, when conducted upon correct principles, than from its longevity. If men in the enjoyment of health, strength, and the use of their faculties, were, during the summer and autumn of life, zealously to improve the talents committed to their care to the best advantage, they would secure much comfort and happiness for themselves, as well as for the rising generation, and would receive great consolation during the infirmities which generally accompany old age.

It may be observed in general, that men spend a third, a fourth, or a fifth part of their lives in infancy and education, and that there are but few characteristic events in either of these stages ; but when both these periods are combined, they may be considered as the two stepping

ladders to the stage of life, where men often form their own characters and stations in every class of society, and where they frequently rise by their talents, industry, and perseverance, to wealth, honour, rank, and power.

It will be found that talents and industry so happily adapt themselves to the common concerns of life, as frequently to raise men from the lower stations to the higher; that knowledge is a power of the first magnitude, and discovers the great laws of nature, from astronomy, the parent of knowledge, down to chemistry and mineralogy.

The laws of nature, though simple, are grand and sublime; and the more they are discovered, the nearer they will approach each other; but when cemented by combinations, there is no knowing to what extent they may promote the comforts and happiness of man.

Accidents have also given birth to important discoveries, which, when matured by experiments and calculations, are often productive of great and important advantages to scientific and practical objects, that contribute to the convenience, comforts, and happiness of society; and these discoveries, when united with others, increase their utility.

There are few men whose names are more familiar to our ears in this country, as the promoters of knowledge and science, than Bacon, Boyle, Newton, Halley, Herschell, Franklin, Priestley, Watt, Davy, Arkwright, and Peel.

The observations and discoveries of some of these distinguished men led to the change of the Old to the New Style in 1752; an act that has created a greater revolution in the civil concerns of this country, without bloodshed, than many of its wars.

Early in the era of the New Style, the march of intellect had been making rapid strides, almost as quick as thought; owing perhaps much of the rapidity of its progress to the combination of the various branches of knowledge and science, and the application of machinery to the different arts. After the effervescence of the moment has subsided, it is hoped some will shoot out into new discoveries and ramifications, producing endless varieties conducive to usefulness and happiness. About the period alluded to, England began to increase in population, agriculture, civilization, arts, manufactures, and commerce.

After these digressions, it may be time to resume the consideration of the great importance and utility of human life; and perhaps one of the best means of obtaining that knowledge is for a man to ask himself whether he would wish to live his life over again; and at my age I may be allowed to take the liberty of stating, that on the whole, having enjoyed health, strength, and the use of my faculties, with many friendships and attachments, though not without many trials, I think I should have little hesitation in making my choice in the affirmative, wishing some things, however, undone, and others improved.

NARRATIVE.

With these sentiments, it can hardly be expected that I should give the details of the birth, parentage, and life of a private individual. With all the allurements that are attached to biography, people are too apt to descend to the frolics of a school-boy, or the eccentricities of a man, which are little interesting to the public ; and it would be better, I conceive, for a man's failings to die with him, and his virtues to live after him.

Suffice it to say, my parents were of good families, and much respected ; they had eleven children ; two died when young, and the remainder lived long after their parents, and were respected in their different stations of life.

As to myself, I was the second son of Samuel Vaughan, Esq., long a merchant in London, and Sarah, the daughter of Benjamin Hallowell, Esq., of Boston, Massachusetts. I was born on the 22d of Sept. 1752, a month and a year ever memorable in this country for the alteration of the Style ; and, if it is of any further importance, my birthday is remarkable from the coronation of George III. having taken place on its anniversary in 1763, which, as long as he lived, was kept with public rejoicings.

My parents were desirous of giving their children a good and useful education ; and my excellent mother paid great attention to their health, religion, morals, and temper.

I was placed at an early age at Mr. Newcome's school in Hackney, (one of the best private schools of the day,) and from thence was removed to the academy at Warrington, where my elder brother Benjamin had preceded me,

and which is situated between Liverpool and Manchester, the seats of commerce and manufactures. At Warrington I derived many advantages from attending the various lectures on history, literature, and general knowledge, which may perhaps have had a tendency to give a bent to some of my occupations in life, for which opportunities I feel grateful to my parents.

The academy at Warrington, at that period, was held in great estimation from the reputation of its tutors and the greater field they held out in promoting general knowledge and science on liberal principles, and many other pursuits not to be obtained in common grammar-schools. Dr. Aikin, the divinity tutor, was a man of great reputation, and was the parent of Dr. John Aikin and Mrs. Barbauld, whose literary works are well known to the public. Dr. Priestley was another tutor distinguished for his amiable character and kindness of manner as well as for his literary and philosophical pursuits, and for his lectures on history, &c. &c. My eldest brother Benjamin and myself resided in his house, and derived very great advantages from that circumstance.

My brother was possessed of considerable talents and general knowledge, which by perseverance made him conversant with philosophical pursuits, and introduced him to the acquaintance of many distinguished men.

After leaving Warrington he went to Cambridge, and thence to the Temple, where he studied law, and went subsequently to Edinburgh, where he studied medicine, but never practised either professionally. He was in Parliament for some time, and afterwards removed to America, and resided many years at Hallowell, in the State of Maine, where he continued his literary, scientific,

and agricultural pursuits. His valuable library was easy of access, particularly to medical men, and he was often with them at their consultations as a friend, but not professionally. He died in December, 1835, in his eighty-fifth year, much beloved by his family and regretted by society. He was well acquainted with Sir Joseph Banks, Mr. Cavendish, Dr. Price, Dr. Franklin, Sir Charles Blagden, and Dr. Priestley, who, when he published his *Lectures on History*, in 1797, dedicated them to his pupil. His friendship and connexions with Dr. Franklin were intimate and lasting, particularly during the period when my brother was confidentially employed to promote the negociation for a peace with America. In 1779 he collected and published, without a name, the "Political, "Miscellaneous, and Philosophical Essays of Dr. Franklin," which was the best collection that could then be obtained. In 1796 a more enlarged collection of Dr. Franklin's papers, with his life, appeared in 3 vol. 8vo. which my brother also superintended. He afterwards, with other friends, prevailed on Dr. Franklin to collect his works and to write a memoir of his own life, which were subsequently published by his grandson, Temple Franklin, in 3 vol. 4to.* One copy of the manuscript life was sent to the Duke de la Rochefoucauld, at Paris, and another copy was sent to my brother, which the Doctor kindly permitted me to peruse. It remained some time in my possession, and I profited much from the life and

* There is a more recent publication of Dr. Franklin's Life, Works, and Letters, by Jared Sparks, in six volumes.

I have in my possession a good portrait of Dr. Franklin and his walking-cane, which he gave to my father, and which I greatly value.

writings of a man who was an ornament to society, and who ever considered utility as the great principle of life.

With respect to myself I shall only state that I attended all the lectures at Warrington except Divinity ; it being intended that I should follow mercantile pursuits. My studies were much directed to geography, history, travels, and voyages of discovery. I took great interest in accounts of shipwrecks and other disasters at sea. I also saw and heard a great deal respecting canals, docks, manufactures, commerce, and population ; and as small beginnings often lead to greater efforts, I was, in 1791, induced to join with some friends in endeavouring to procure a good collection of the history and plans of the canals of this country, with a view of forming a society for their encouragement ; and, for this object, I wrote a prospectus, which appeared on the wrapper of the European Magazine ; but the attempt failed. A copy of this paper will be found in the Miscellaneous Part, No. 1.

In Dr. Rees' Cyclopædia will be found an accurate description of all the canals then made, making, and projected in England ; and there is also another article in the same work which gives much information on the subject of docks. With a view to these objects I made a collection of all the plans of canals, both English and foreign, which I could meet with, with descriptions and details, forming three large folio volumes ; and another collection on the subject of docks, which formed two volumes more, with various other documents connected with these subjects.

A society was also formed for the improvement of naval

architecture, and for collecting the best information on that subject, in which the late Colonel Beaufoy took the lead. Many experiments were made in the Greenland Docks of importance to science, which were conducted principally under his inspection; and his son, Henry Beaufoy, Esq., of South Lambeth, has lately published an account of them in a princely style, giving the work to a great many public bodies and private individuals both at home and abroad.

Some of the first naval men of the time belonged to this society, and his late Majesty William IV. when Duke of Clarence, honoured it with his sanction. I often attended the committee with Colonel Beaufoy, Captain Laird, R.N., Mr. Daniel Brent, the ship-builder, and others; and I contributed a paper on naval architecture and the preservation of timber, a copy of which will be found in the Miscellaneous Part, No. 2.

In 1783 I was elected a Director of the Royal Exchange Assurance Corporation, and continued in it, first as director and afterwards as sub-governor and governor, until the year 1829, a period of forty-six years without intermission. This period embraced the most useful, important, and pleasant part of my life, during which I formed many friendships and attachments. Having some leisure, and wishing to make myself useful in that situation, I drew out various general and consolidated statements of the different branches of the concerns of the corporation for a century, namely, from the year 1720 to 1819 inclusive, for which I received the thanks of the Court, and they were pleased to adopt many of the hints and suggestions therein submitted to their consideration, and to request me

to sit for my portrait, which was painted by Mr. Phillips. In the Miscellaneous Part, No. 3, will be found the Resolutions of the Court, and my answer for their thanks, and also for my picture being permitted to be hung up in the Court-room. These documents were contained in seven volumes, and when completed, including the final report upon all these transactions down to 1827, were presented, in December 1837, with a letter, a copy of which is annexed ; but unfortunately all these reports and statements were destroyed by the late dreadful fire at the Royal Exchange, as well as the portraits of Edward Foster, Esq. governor ; William Vaughan, Esq. governor ; Pasco Grenfell, Esq. governor ; and Samuel Fenning, Esq. for long services, and many years a sitting director.

In 1796 I became acquainted with Captain David Woodward, and received from him an account of his hardships and sufferings in the Celebes Seas, and of his residence in the island of that name. He was the mate of the American ship Enterprize, Captain Hubbard, going from Batavia to Manilla, and being detained for some weeks in the Straits of Macassar by head winds, and in distress for provisions, his captain sent him with four men to a vessel at a distance to request supplies ; but not being able to procure any beyond a momentary refreshment, they left that ship the next morning, taking with them only a bottle of brandy. They lost sight of both vessels and fell in with a Malay proa, with the crew of which they endeavoured to barter for supplies, offering them money in exchange. The Malays attempted to fire on them, but their muskets failed, when Woodward soon after pushed into an inlet in the island of Celebes, and while they were cutting cocoa-

nuts the Malays seized his boat and killed George Miller, the man who was left in charge of it. Woodward and the survivors, after enduring great hardships for nearly twelve days and almost without provisions, surrendered themselves to the natives and lived amongst them, with various hardships, between two and three years. They then seized a boat, reached Macassar, found their way to Batavia, and thence to Calcutta.

While Captain Woodward was there, the Ship *America* arrived in Bengal, and, to his great surprise and joy, it was commanded by his old friend Captain Hubbard, the very Captain with whom he had sailed three years before in the *Enterprise*, when he lost him in his boat in the Straits of Macassar. Captain Hubbard was quite overjoyed to see Captain Woodward, and soon convinced him that he had not forgotten him, and told him that he had given up the boat for lost, after having waited in the Straits for three days, and had sent home his clothes to his wife, (or widow as he supposed) with the balance of his wages.

Captain Hubbard pressed Captain Woodward to go with him to the Mauritius, and promised that on their arrival there he should succeed him in the command of the *America*, which belonged to the same owners as the *Enterprise*.

At the Mauritius Captain Woodward met with three of his old messmates and fellow-sufferers,—John Cole, George Williams, and William Gideon. The other, named Robert Gilbert, had previously gone to America. As may be supposed, they were not a little glad to see each other again. Being now in a more prosperous situation than when they first parted, he furnished them with clothes and shoes.

Captain Woodward being appointed to the command of

the America at the Mauritius, arrived in London in 1796, consigned to my firm. I obtained from him a narrative of his sufferings, which was afterwards published by Mr. Johnson, in the year 1805. I dedicated it to my friend and relative, Captain Benjamin Hallowell, an officer well known in the British navy as one of Lord Nelson's Captains in the action of the Nile.*

Captain Hallowell was afterwards created an Admiral and Knight-Commander of the Bath, and took the name of Carew, with an estate bequeathed to him by our relative, Mrs. Gee, of Beddington Park, Surrey, and entailed upon his heirs.

To Captain Woodward's narrative was added a list of fifty-two well-authenticated cases of accidents, shipwrecks, and interesting escapes by sea and land, calculated to teach that none should even under the most unfavourable circumstances despair.

Messrs. Constable have since published Woodward's Narrative in their Collection of Voyages, vols. 78 and 79.

* "Part of the *Orient's* main-mast was picked up by the *Swiftsure*; Captain Hallowell ordered his carpenter to make a coffin of it; the iron as well as wood was taken from the wreck of the same ship: it was finished as well and handsomely as the workman's skill and materials would permit; and Captain Hallowell then sent it to the Admiral with the following letter:—

"Sir,—I have taken the liberty of presenting to you a coffin made from the main-mast of *L'Orient*, that when you have finished your military career in this world, you may be buried in one of your trophies. But that that period may be far distant, is the earnest wish of your sincere friend, BENJAMIN HALLOWELL."—*Southey's Life of Nelson*.

I had the pleasure of seeing Captain Hubbard when he came to London, and of receiving from him a written confirmation of Captain Woodward's Narrative; and it is also a remarkable fact, that one of the seamen who was with Captain Woodward, some years afterwards called on me, and after perusing the narrative, said it was very accurate. He had been in the navy, and wished me to recommend his son to be made a midshipman.

An attempt was made to form a society for the purpose of preserving life, and aiding those who might be exposed to shipwrecks or other hardships, by collecting the narratives of those who had survived such trials, that others might profit by their experience; but the attempt failed.

I felt it my duty, at various periods during the long war, to attend with others the different committees for public subscriptions; such as that upon the loss of the Royal George with Admiral Kempenfelt at Portsmouth, on the 3d August, 1782; that for the suppression of the mutiny at the Nore; and afterwards on another committee for raising a subscription for the relief of the wounded and the families of those who were killed at the battle of Camperdown, under Lord Duncan, when a very large sum was collected. This victory was highly important for its preventing a descent on Ireland.

The year 1797 was a year of much anxiety, from a state of insubordination instigated by evil-minded persons in the British navy; and also by the mutiny at the Nore, which excited so much attention, that the merchants, bankers, and traders of London were publicly convened to meet on

the Royal Exchange, in order to take prompt measures to restore tranquillity; and they came to a resolution to recommend, that all persons who were concerned in the same should not in future be again employed in the naval and merchant service of this country. An active committee was appointed, and a large subscription raised to take such measures as might be deemed expedient upon such an occasion. These resolutions were printed and circulated, and found their way the next morning early on board the man of war in which Parker and his associates were assembled; and from the information given by an elder brother of the Trinity House, who had been detained on board, he stated that the resolutions had produced a great effect on Parker and the ship's crew.

The committee were active in their exertions, and to promote their views, I drew up a little address to the British seamen, which was approved and circulated by the aid of Sir Evan Nepean, Secretary of the Navy.

The resolutions of the merchants, and this address, went to prove how much the British seamen were better off than the seamen of other countries. A copy of the address will be found in the Miscellaneous Part, No. 4.

As one of the committee, I accompanied Captain King, (an elder brother of the Trinity House) to the Admiralty, and saw Sir Evan Nepean, and after some conversation we were introduced to Mr. Pitt and Earl Spencer.

The committee appropriated the funds raised in the purchase of swords and plate, as presents to the officers, and in gratuities to the men, for the performance of their duty, and the suppression of the mutiny.

I felt it my duty also to attend the embarkation of volunteers from the Dundee Arms in Wapping down to

Woolwich; and just as the Gravesend boat was going off, I received a note from Sir Evan Nepean, stating that the mutiny was at an end. But the boat departed, to entitle the men to receive their bounty.

In the year 1797 there were two naval actions, both of them important in themselves, and peculiarly so from the state of the times: one was that of Sir John Jervis, off Cape St. Vincent, in February, and the other that of Admiral Duncan, on the 11th October, which dispelled the gloom that had hung over the nation. They were important from the confidence which was restored to the country, and preventing, as before stated, a descent upon Ireland.

Sir John Jervis, with fifteen sail of the line, two of which were three-deckers, off Cape St. Vincent, fell in with and gallantly engaged the Spanish fleet, under Admiral Don Joseph de Cordova, of twenty-seven sail of the line, seven of which were three-deckers, and captured four of them, two of which were three-deckers. He was ably seconded by Rear-Admiral Nelson and the Captains of his division. In this action British valour shone with the greatest splendour.

Duncan, being reinforced, sailed with sixteen ships of the line, and engaged the Dutch fleet consisting of seventeen sail of the line, commanded by Admiral De Winter, and after a gallant and severe conflict, Admiral De Winter's flag was struck, his ship being totally disabled, and Lord Duncan took ten ships of the line; three were destroyed, and 4 escaped to the Texel, under the command of the Dutch Admiral, Story. Admiral De Winter was received in this country with all the respect and attention due to his gallant conduct upon the occasion.

It is stated that at a dinner given by one of the ministers to Lord Duncan and Admiral De Winter, that when the health of the latter was given, he appealed to Lord Duncan, whether, if the other four ships had not left him, he would not in all probability have gained the victory. Lord Duncan, with that pleasantry and delicacy so natural to him, replied by filling his glass, and saying, "Admiral De Winter, I am exceedingly happy to drink your health in this good company."

A large sum of money was raised by subscription for the relief of the sufferers in the above action, and a committee was appointed for its management.

The committee in the several reports of their proceedings upon 9th July, 1801, 29th October, 1802, and 17th January, 1804, stated, that out of 1040 cases of persons reported to have been killed or wounded in Lord Duncan's action, that all the wounded and the relatives of those who were killed, were relieved, except thirty-six, who could not be found, and that the unclaimed gratuities which had been allotted to these persons, were given to the consuls and churches in London of the different nations to which the foreign seamen belonged, and a portion of those gratuities that were then lapsed, to Greenwich Hospital, to the Merchant Seamen's Office, and to the Marine Society, as institutions intimately connected with the naval and mercantile service of this country: also donations to an hospital in London, another in Edinburgh, and one in Dublin, upon the condition of their receiving such wounded seamen as were in Lord Duncan's action that applied for admission.

In order to secure the regular payment of certain other annuities that had been granted to those who had been severely wounded, or to the families of those who had

been killed, the committee transferred to the Marine Society, in trust, the amount of those annuities, under certain regulations; for the particulars of which vide Miscellaneous Part, No. 5.

At the battle of the Nile, on the 21st of August, 1798, Rear-Admiral Nelson, with thirteen ships of the line, (one of which, the Culloden, got on shore, and was not in the action) and one of fifty guns and a brig, engaged the French fleet under Admiral Brueys, consisting of thirteen ships of the line and four frigates, and totally defeated it, taking and destroying eleven ships and two frigates. One of those ships of the line that escaped, and one frigate, the Diane, were taken at Malta, and the other ship of the line by a squadron in the Mediterranean. The British fleet had 1000 guns and 8000 men. The French fleet 1200 guns, and ten to 11,000 men.

With respect to the battle of Trafalgar, which took place on the 21st October, 1805, Lord Nelson was ably seconded by Admiral Collingwood; and the fleet consisted of twenty-seven ships and four frigates, and the combined fleets of France and Spain, commanded by Admirals Villeneuve and Alava, consisted of thirty-three ships of the line and seven large frigates. Admiral Collingwood sent to Gibraltar of the

Enemy's fleet	.	.	.	.	.	4
Destroyed	.	.	.	.	.	16
Escaped to Cadiz, wrecks	.	.	.	.	.	6
Ditto serviceable	.	.	.	.	.	3
Ditto to the southward	.	.	.	.	.	4

And to crown the victory, great as it was, Rear-Admiral Sir R. Strachan, with four sail of the line and three frigates, fell in off Ferrol with the four sail of the line that escaped from Trafalgar under Admiral Dumanoir, and took them on the 4th of November, 1805, thus annihilating the enemy's naval power.

In the battle of Trafalgar Nelson lost his life, and the country one of its greatest heroes. He was buried at St. Paul's with public honours, in the coffin given him by Captain Hallowell; and the members of the Houses of Lords and Commons attended the ceremony as chief mourners.

It is a curious fact, that Mr. Clerk, of Eldin, near Edinburgh, wrote a book on naval tactics, without having been at sea or on board a man of war, in which work he recommended the breaking the enemy's line and doubling on the division that was to windward, and by so doing to defeat an enemy's fleet of greater force.

Lord Rodney, Lord St. Vincent, and Lord Nelson tried the experiment with success, and each of them wrote a letter to Mr. Clerk, stating that they were greatly indebted to his suggestions for their victories.

It may be remarked, that during a long war, England, by the superiority of its navy and discipline, obtained victories over the combined fleets of France, Spain, and Holland, and destroyed their naval power; and Wellington at Waterloo, by land, overcame the most renowned general of the age, and gave peace and tranquillity to Europe.

I belonged to the Society for bettering the Condition of the Poor, which, in 1815, came to a resolution to recommend the establishment, in the metropolis, of those useful and important institutions, Savings Banks;

and a meeting was held in Westminster, at which a number of distinguished and respectable persons attended, for the purpose of forming the Bank which was afterwards opened at Leicester-place. At this meeting I stated, that it was in contemplation to establish one in the City of London; and subsequently it was settled, by a meeting of a few friends at my house, that one should be established. This was carried into effect at Bishopsgate Church-yard, in July 1816, whence it was transferred to a new building at Blomfield-street, Moorfields, (its present situation,) in 1828; and, on laying the first stone, I received a silver trowel, with the following inscription:—

Respectfully
presented by
MR. JAMES FOSTER,
Builder,
to
WILLIAM VAUGHAN, Esq.
Governor
of the
ROYAL EXCHANGE ASSURANCE
COMPANY,
on his laying the First Stone
of the
LONDON PROVIDENT INSTITUTION,
OR BANK FOR SAVINGS,
in BLOMFIELD-STREET, MOORFIELDS,
in the CITY OF LONDON,
he being one of the Vice-Presidents, and Chairman
of all Committees,
on the 20th day of September,
1827.
J. B. SHEPHERD, Esq. Architect.

In February, 1836, in consequence of increasing age and infirmities, I resigned my situation as Chairman of the Superintending Committee, and their thanks were returned to me for my services, as will be found, with my answer, in the Miscellaneous Part, No. 6.

In consequence of the great increase of the business of this Institution, the Committee purchased the lease of the house adjoining, pulled it down and rebuilt the same, having a new lease, for a longer term, granted by the City. Since its first establishment, in 1816, to 20th November, 1837, during a period of 21 years, there has been received, including interest .. £2,609,640 0 4
Deducting payments to depositors, in-

cluding interest and disbursements 2,053,853 3 2

Leaving the sum of £555,786 17 2

due to 25,010 depositors.

I was also on the Committee of the Society for the Refuge for the Destitute, and for the Society of Friends for the Relief of Foreigners in Distress. I resigned my situation as Treasurer to the latter in 1829, after holding it for twenty-one years, when I received a letter of thanks from the Committee. I also belonged to the Marine Society and Merchant Seamen's Office.

From connexions and friends in America I became acquainted with many of the distinguished and literary characters of that country, and from their kindness I have been made an honorary member of the American Philosophical Society at Philadelphia, and of the Philosophical and Historical Societies at New York. I was likewise a member of a Committee for the relief of

British prisoners in France, for whom a liberal subscription was raised. The money was transmitted, at various times, to a Committee of respectable officers and others, who were prisoners there, to be distributed in such a manner as should be found most advantageous. Regular returns of the application of the money were made to the Committee in London.

The New England Corporation for civilizing the Indians in New England and parts adjacent is one of which I am also a member. I became a member of this Company many years ago, and succeeded Sir William Pepperell, Bart. as Governor, which office I resigned in 1829, still retaining my situation as a member of the Company, and continuing upon their Committees.

After New England became independent by the American revolution, the field of operations for the Company was, by a decree of the Lord Chancellor, transferred to the British colonies adjacent to New England.

The first operations of the Company, after this decree took place, were in New Brunswick; but not meeting with the success they anticipated, they removed their establishment to Upper Canada, where it is principally confined to the Indians of the Six Nations upon the Grand River, consisting of the Mohawks and other tribes, who had removed from New England and the parts adjacent.

A portion of the funds under the Company's directions is applicable to the advancement of the Christian religion among Indians, Blacks, and Pagans in some one or more of His Majesty's plantations or colonies; and they have devoted a part of them, with some success, to the

instruction of the negroes in Jamaica and other British islands in the West Indies.

I have been for many years a fellow of the Royal Society, and a member of the Royal and London Institutions from their commencement.

I have been a governor of St. Thomas's Hospital, and on its Committees for many years.

I was many years, and still remain, a governor of Christ's Hospital, an Institution established by Edward VI. of great public utility, where many of our distinguished characters have been educated. It gave me much pleasure to promote the objects of Professor A. D. Bache, of Philadelphia, a great grandson of Franklin, the President of Girard College for Orphans, founded and endowed by the late Stephen Girard, a wealthy citizen of Philadelphia. The Professor came to Europe to inspect such public establishments as were conducive to the carrying this great scheme into effect. He had free access to Christ's Hospital, and was much gratified to see those objects that promoted his views.

I was made an honorary member of the Society of Civil Engineers at the time the docks for London were in contemplation and execution. I have belonged to many literary and charitable institutions which are not adverted to; and it may now be time to conclude this digression.

I have been placed in many situations where I have endeavoured to make myself useful, and been blessed with many friendships and attachments, and my wishes now induce me to decrease my occupations; and I have found, from experience, that contentment forms a large portion of the happiness of human life; which

is confirmed by what Mrs. Barbault says, (whom I became acquainted with early in life,) who shews that, by moderating our wishes we may lessen many of our imaginary wants and evils; and I now seek, during the remainder of my life, for ease and retirement, and I look forward with a humble hope that I may hereafter be transferred to a better and happier state.

September 22, 1838.

Part Second.

R E M A R K S

ON THE

STATE OF THE PORT OF LONDON IN 1793 ;

WITH AN ACCOUNT OF THE

RISE AND PROGRESS OF THE DOCKS

AND OTHER IMPROVEMENTS UP TO THE YEAR 1837 ;

WITH

A FEW HINTS AND OBSERVATIONS

ON THE

COMMERCE AND PROSPERITY OF ENGLAND.

REMARKS ON DOCKS.

It was intended to have given a summary statement of each of the docks and their accommodations from their beginning to their completion; their rise, progress, objects, and dimensions; but after a lapse of forty years and upwards, and the charters of the docks for twenty-one years having long expired, it was thought advisable to complete this collection by putting together the Tracts that were written by me, and reprinting some that were out of print. It is only intended in this second part to give a brief abstract of this collection, referring to the Tracts themselves in the Appendix for further information.

The Collection of Tracts for promoting docks, warehouses, and other accommodations in the Port of London, were written between the years 1793 and 1800. The first of these Tracts was written in 1793, and being favourably received by the mercantile and shipping interests was then printed for private circulation; it suggested St. Katharine's, Wapping, the Isle of Dogs, and Rotherhithe as convenient places for them, giving the preference to the plan for the London-Docks at Wapping, on account of its local advantages, and its vicinity to the seat of commerce.

These Tracts were first printed to show the wants of the Port of London in 1793, and the remedies proposed.

A meeting of the chairmen of public bodies and of merchants was convened, by public advertisement, to meet

at the Merchant Seamen's Office, on the 6th March, 1794, to take into consideration the state of the legal quays. They adjourned to the 14th March, to meet at the Marine Society's Office, to take into consideration the inadequacy of the legal quays for the accommodation of the trade of London, which were the same as at the time of Queen Elizabeth, between London-Bridge and the Tower; when it was resolved, after deliberation, that a committee of forty-one be appointed to take the same into consideration, and to report their proceedings, as occasion might require, to a general meeting. The committee met on the 18th March, 1794, when they resolved that the legal quays and sufferance wharfs were inadequate for the accommodation of the Port, and that they would be ready to receive any information or proposals for the further accommodation of the trade.

And upon the 13th March, 1795, the Committee came to the resolution, "that wet docks at Wapping would
" best tend to remove the difficulties and inconveniences
" which affected the commerce of the Port, and that they
" were of opinion that the forming a cut from Black-
" wall might be proposed, and that a communication of
" the plan should be made to the Corporation of the City
" of London, and also to Government to request their
" support."

A general subscription having been agreed upon, and books opened for the purpose, the subscribers met at the London-Tavern, on the 5th January, 1796, Edward Forster, Esq. in the chair, and after passing several resolutions they agreed to prepare a petition to Parliament to bring in a bill for the purpose, and they further resolved,—

" That the thanks of this meeting be given to the chair-

“ man, deputy-chairman, treasurer, and committee who
“ have prepared the business for this meeting.”

Also resolved,—

“ That the thanks of this meeting be given to William
“ Vaughan, Esq. for the assiduity and ability he has
“ manifested, and the assistance he has given during the
“ progress of this business.”

During the progress of their investigations the committee of forty-one employed Mr. Powsey, who had recently constructed Mr. Perry's dock at Blackwall, to make a survey of Wapping; and his report being approved of, on the 24th August, 1794, Captain Huddart and Mr. Vaughan were requested to find out an efficient person well qualified to make a regular and correct survey of the vacant space at Wapping for forming the London-Docks.

Mr. Daniel Alexander, who had been employed in a difficult work of hydraulic architecture, in widening Rochester-bridge, and also as surveyor in building warehouses in the Tidal works of the Port of London, and who was strongly recommended, was appointed to make a detailed and accurate survey of the site for docks at Wapping; on account of its large open space of low land much below high water mark, and being covered by comparatively few houses, with a fine entrance from the deep water of the pool at Bell-Dock. The survey was completed in seventy days, and was found so correct as to require no alterations.

Various other plans were submitted, possessing merit; but that for the London-Docks at Wapping being preferred, a committee was appointed to carry the same into execution, as before stated.

In the original plan of these docks submitted to Parlia-

ment was a cut from Blackwall to the docks at Wapping, to avoid the circumnavigation of the Isle of Dogs, which was afterwards relinquished, and the application confined to the formation of "The London-Docks" only. On the plan submitted to Parliament was shown the number of streets and houses as they then stood; and upon that plan was also drawn the outline of a dock of twenty-seven acres, giving the largest possible area of water, with the longest quay-room, and a figure a little irregular, to suit surrounding property, and a basin of three acres, with an entrance at Bell-Dock, afterwards approved of by the Court of Directors, in August, 1800; it was also further proposed to throw out a jetty into the dock, alongside of which ships might load and unload on three sides of the wharf.

The whole was referred to a committee of civil engineers of great repute, viz. R. Mylne, Joseph Huddart, John Rennie, and William Chapman, Esqrs. and the dock was executed by J. Rennie, Esq.

On the 3d of February, 1801, Mr. Vaughan, wishing to aid the operations of these engineers, took the liberty of suggesting various hints as to objects of a local nature, many of which were adopted. These details being of a local nature are not here inserted.

Mr. Alexander had the planning and constructing of the five stacks of spacious warehouses on the north side, situated 100 feet from the docks, to allow sufficient space for the convenience of loading, unloading, housing, &c. with cross walls each way, from the foundation up to and through the roof; forming four distinct compartments, with stone staircases at each gable end up to every floor, with iron doors at their entrances, and double iron doors to connect or separate the rooms; which gave convenience

and security against fire. Mr. Alexander also completed the spacious vaults, which were capable of receiving many thousand pipes of wines and spirits, as well as the tobacco-warehouse, which covers the space of between four and five acres. The whole of the premises were encircled by a high wall, and were completed under his direction; and some years afterwards the adjoining or eastern dock of about seven acres was constructed, and the new warehouses were built by him. This dock was afterwards connected with the river by a cut at Bell Dock, Shadwell.*

Mr. Alexander drew various plans and made sundry borings for the state of the soil within the space intended for the docks; he also made an estimate of the value of the houses and premises intended to be purchased, and assisted in taking assents and dissents to the bill in question, and in building the warehouses for the second dock, and altering the building for the revenue-officers.

Mr. Alexander continued as surveyor to the Dock Company from 1794 to 1831, a period of thirty-seven years, when he resigned a situation which he had filled with zeal and ability.

The Company were also very much indebted to the zealous and active exertions of George Robinson, Esq., their first Secretary, who died in their service in 1827, for assisting to obtain the different Acts of Parliament; and for his general disinterested and judicious attention to their affairs, they voted him a handsome gratuity for these services, which he duly merited.

* In 1838 the London Dock Company, to create more quay room and greater convenience, carried out a jetty 800 feet long, at which ships may load with greater despatch.

The usual measures were taken to petition Parliament in favour of the Docks, when the House of Commons appointed a Committee to take into consideration all the plans that were proposed for the relief of the Port. During their progress two other tracts were written, printed, and circulated as follows:—

“Reasons in favour of London Docks” was a little publication distributed in 1795, and reprinted in 1796 and 1797. About 3000 of these were printed off and given to friends and opponents, and contributed greatly to remove many objections to Docks, and to their proposed situations. This tract will be found in the Appendix.

The next Tract, dated 16th August, 1795, was a Letter written to Thomas Irving, Esq., the then Inspector-General of Parliamentary Reports, by whom I had been favoured with many documentary papers respecting trade and shipping. In conversing with him on the importance of attaching the bonding system to the plan for making Docks, he requested me to communicate the same in writing; but time would not allow much care and consideration in composing a letter which was never intended for publication. He asked permission to communicate the letter to Mr. Pitt and Mr. George Rose, who were pleased to receive favourably the suggestions contained in it. Some few copies were afterwards printed in March, 1796, for private circulation. This letter being out of print, has been reprinted.

The bonding system had only been extended at this time to tea, tobacco, and rum; but when the Acts of Parliament passed for making docks, the West and East India trade were allowed the bonding system for their respective imports, under “An Act for permitting certain

“ Goods imported into Great Britain to be secured in “ Warehouses without payment of Duty.”—43*d* George III. *cap.* 132. In the merchants’ docks at Wapping, which had been intended for general purposes, the bonding system was in like manner granted for wine, brandy, rice, and tobacco. The charter for these docks was for twenty-one years.

Upon the expiration of these charters, this bonding system was extended equally to all the Docks that were entitled to the warehousing system. This system has at farther times been extended to many other articles of trade, and by degrees has been granted to the Docks of most of the leading outports. The advantages derived from it were great to the merchants, commerce, and revenue. It gave the merchants the command of capital in their commercial concerns; it encouraged making England a *dépôt* for the exportation of its commerce to foreign parts without the payment or the drawback of duties, and left the payment of duties to be made at the moment of home consumption. It prevented much smuggling and illicit trade, and was a great saving to Government in the expenses of watching goods until landed, and in the expenses of collecting the revenue. The Docks also prevented much plunder and pilfering.

The Examination of William Vaughan, Esq., before the Committee of the House of Commons, dated 22d April 1796, was the next Tract, and will be found in the Appendix, of which the following are some of the general outlines. He produced a plan of a survey of the River Thames, made at his own expense by Capt. A. M. Shields, with the soundings of the river, and the position and number of the mooring-chains, from London Bridge to Bugsby’s

Hole; and also plans of the several sections and soundings across the river at different parts by Capt. Shields. The plan was drawn to a scale of 40 yards to an inch, and extended to 18 feet in length. When presented to the Committee of the House of Commons it could not be received in evidence, from its being private property and from other causes; but it was permitted to remain there and to be referred to in the examination of Capt. Shields and Mr. Vaughan. These plans and sections, and also a printed copy of the first plan submitted to Parliament, as executed by Mr. Alexander, were afterwards presented to the London Dock Company, and are now hung up at the Committee-room at the London Dock for inspection.

As there were so many schemes for Docks, and other plans afloat for the improvement of the Port, and more proposed than the immediate commerce of the Port required, it was deemed expedient to see how much of the trade of the Port could necessarily lie and discharge in the river; leaving British and foreign ships from foreign parts, that were valuable on account of their cargoes and revenue, to resort to Docks at discretion.

Sir William Young, Bart., the Chairman of this Committee of the House of Commons, wishing to have some information as to the powers and capacity of the river for the reception, laying, loading, and unloading ships, requested to have answers to some queries on these and other subjects, which will be found in the Evidence printed in this collection, in the Appendix.

His Majesty George the Third having intimated a wish to see the different plans for the London Docks, they were sent to him with the Tracts that had been printed and

other papers ; and his Majesty was pleased to return the plans with expressions of great satisfaction.

In the year 1794 many of these Dock Tracts that had been then printed were collected and bound together for private circulation ; since which two other Tracts were printed, viz. Answers to Objections against the London Docks, written in 1796, and a Comparative Statement between the London and the West India Docks, written in 1799. These two pamphlets contain many observations upon commerce, and are now added to complete this collection of Tracts on Docks, Trade, and the Bonding System.

In consequence of the long and great discussions, for four sessions in Parliament, on the formation of the London Docks at Wapping, and the many competitions that sprung up in all quarters, and a fear that the West-India trade would not be early provided for, Robert Milligan, George Hibbert, Esqrs., and a respectable number of merchants, planters, and others advocated the formation of Wet Docks in the Isle of Dogs, and in conjunction with the interests of the City of London they procured an Act of Parliament for making two Docks exclusively for the West-India trade, with wharfs and warehouses ; one for the import and the other for the export trade, with an entrance basin at Blackwall, and another at Limehouse-hole. The Act for these Docks was for twenty-one years, and after the expiration of the charter, the West-India trade was laid open, and at liberty to go to any other docks in the Port of London. The Act passed in 1799, and the first stone was laid on the 12th of

July, 1800, and opened for the reception of shipping on September 1, 1802.

George Hibbert, Esq., was the first Chairman, and Robert Milligan, Esq., Deputy Chairman, and were the great promoters of these Docks; and upon the death of the latter in May, 1809, the proprietors, much to his honour, were pleased, for his active services, to erect a statue to his memory with the following inscription:—

To perpetuate on this spot
the Memory of
ROBERT MILLIGAN, Esq.,
a Merchant of London,
To whose genius, perseverance, and guardian care,
the surrounding great work principally owes
its design, accomplishment, and regulations,
THE DIRECTORS AND PROPRIETORS,
Deprived by his death,
On the 21st May, 1809,
of the continuance of his invaluable services,
by their unanimous vote
caused this statue to be erected.

The statue was erected by Mr. Westmacott in 1813. The above inscription is on a bronze tablet at the back of the pedestal of the statue; the plate was originally placed in the front.

My friend George Hibbert, Esq. who was one of the principal West-India Merchants of London, chairman of that body, and for many years the able and zealous agent for the island of Jamaica, and for a short time in parliament, died on the 31st October, 1837, respected and re-

gretted by all who knew him. In public, he was an able and judicious advocate, and in private, a warm and kind friend. He was a liberal patron of the arts and sciences, and for many years President of the London Institution.

The Act for the formation of a canal across the Isle of Dogs, to avoid the circumnavigation of the river by Greenwich, passed in 1800, and was under the management of the City of London. This canal was afterwards purchased by the West-India Dock Company, and, with additions, now forms a part of their docks.

The Act for the Merchants' Docks at Wapping, originally intended for general purposes, without exclusion or monopoly, did not pass till the beginning of the next sessions in 1800, without the cut from Blackwall as at first proposed. It was begun in June, 1802, and was opened for the reception of shipping in January, 1805. Under the Warehousing Act, passed afterwards, tobacco, brandy, and rice were allowed to be bonded there.

The Act for the East-India Docks and for bonding teas, &c. (for the trade of India) passed in 1803, and the Docks opened in 1806, and my friend, John Woolmore, Esq., the first promoter, was elected chairman.

The East-India Company, since the alteration in their charter, have sold some of their valuable warehouses in the city, which has caused great alterations as to the system of management of the other docks. The West-India Dock Company have purchased the East-India warehouse in Fenchurch-street, and the St. Katharine Dock Company those in Cutler-street. The East and West India Dock Companies have lately united their interests.

I was on board the ships that first entered all these

docks and the City Canal, as well as the St. Katharine's at a later period.

The Act for the Commercial Dock, on the Surrey side of the river, for timber, oil, corn, &c. passed in the year 1810, and the docks were opened in 1813.

St. Katharine's.—In the year 1825 an Act passed for making docks at this place for the convenience of the Baltic and other trades. These docks owed their origin more to the combination and competition of particular interests than to the increase of trade and commerce of the Port of London. They extend over a plot of ground which had been surveyed by the London Dock Company, but was never further pursued on account of its possessing so small an area for water compared with the great number of houses upon it, and part of them upon a rising ground. These docks were commenced on the 3d of May, 1827, and opened on the 25th October, 1828. Thomas Tooke, Esq. was the first chairman. The dock is divided into two parts, with only one entrance and basin.

TIDES.

In August, 1800, Mr. Vaughan directed the height of the tides to be taken at the gates of the London-Dock, and to be regularly registered under the superintendence of Mr. Pearce, an intelligent foreman, who had been in the employ of Mr. Alexander at the pier-head, and to be kept as at Liverpool. The Directors of the London Dock Company were pleased to permit John W. Lubbock, Esq. F.R.S. who was making some valuable observations on tides generally, to make use of these tables, which were

afterwards printed in his interesting and important Observations on Tides, published in the Philosophical Transactions, from the years 1831 to 1837. There are other valuable communications in these Transactions made by Professor Whewell, of Cambridge, from the year 1834 to 1838, which contained many interesting observations made at 500 stations of the Coast Guard in Great Britain and Ireland, and 100 stations in America, Spain, Portugal, France, Belgium, Holland, Denmark, and Norway, under the direction of the Lords of the Admiralty.

I cannot more happily state the merits and services of these two scientific gentlemen on the subject of tides, than by referring to an extract from His Royal Highness the Duke of Sussex's Address, (which will be found in the Miscellaneous Part, No. 7,) and I hope that their researches in developing the great laws of nature will promote the cause of science and benefit commerce.

Mr. Vaughan frequently attended Captain Shields while he was making the survey of the river and the position of the mooring-chains, and making observations on the tides. Mr. Vaughan himself ascertaining the number of ships that could moor, at high water, between London-bridge and Bugsby's Hole, calculated on the average of various surveys made by him. In the year 1796, a table was also made of the regular rising of the tide from low water to high water mark on the south side of the river, Captain Shield marking the staff every three inches, while Mr. Vaughan kept the time for every ten or fifteen minutes on a calm and quiet day; these observations were not however repeated, but it was observed, that by drawing a line from the point of time to the point of the height of the tide it always produced a curved line.

With respect to the tide of the Thames, it may be stated that there are occasional fluctuations, owing to the state of the winds when the sea of the German Ocean is driven into the mouth of the Thames, instead of through the Straits of Dover; which I conceive will account, together with freshes from up the country, for some of the very high tides in the upper part of the river and at the dock-gates, and which occasioned the tides to flow about twenty feet and upwards. I requested Mr. Pearce to state the periods when they were at and above twenty feet. The water overflowed the banks at the stairs off Wapping, and at one of these periods I went down there and found in the street that I walked through the water half-leg deep, and the people were bailing the water out of their cellars,* and I am not incorrect in stating, that many years ago the tide flowed into Old Palace-yard and into Westminster-hall.

It may here be remarked, that the Thames, in regard to its tides as well as the draft of water at London, is by

* The site of St. John's, Wapping, and parts adjacent were anciently within the influx of the river, and was supposed to have been first embanked in 1544,—“ By frequent inundations of the river Thames its banks in these parts became sufferers; for about the year 1565 divers breaches were made therein, which were no sooner repaired, than another happened in 1571, which the Commissioners of Sewers, after viewing the same, were of opinion that the most effectual way to secure the bank of the river in these parts, would be to erect houses thereon, to which end ground was taken, and the first foundation of the house laid, where Wapping at present is situate.”—*Maitland's History of London*, book viii. p. 768.

See Plan of the London-Dock in the Appendix, p. 2, printed in 1794.

nature most happily adapted to the receipt of shipping in the stream, and the passing them afloat into docks.

The tide flowing gently from the Nore to Teddington, to an average of eighteen feet at the London-Dock on spring tides in a calm and gentle rise, not very much affected by winds, or storms, or freshes, by strong currents or by silt or mud banks: all of which, more or less, together with ungovernable heights of tide, are sometimes severely felt at Liverpool, Bristol, and Hull, and give the superiority to London in this respect.

This, with other properties, forms so fine a port at London in the very heart of the kingdom.

I requested Mr. Pearce to make out a copy of the tide tables kept at the Wapping dock for my own use, which he did till near the time of his death. Captain Maughan, the present dock-master, who succeeded Mr. Pearce, is an intelligent person, now continues them, and is attentive to the causes and operations of tides, and to the usual tables of them; and he has introduced the use of the barometer, which is also employed at Liverpool. He conceives that the plan of the river, as surveyed by Captain Shields, is a very valuable one, and a record of the tides forty years ago.

I did not expect that the tide tables kept at the London Docks would ever have appeared in the Transactions of the Royal Society; though I feel honoured at my name being referred to as having suggested the keeping of these tables in London, in the same manner as at Liverpool.

In the Examination of Mr. Vaughan before the committee of the House of Commons, will be found a plate of the section of the river and of the docks, made by him, and marked W.V. shewing the state of the tides at high

and low water-mark, and at neap and spring tides respectively, and also the rise and fall of the tide for each day.

Little accidents often lead to interesting, if not important consequences. The making of Docks had produced much attention at home and abroad; and my friend Matthew Boulton, Esq. of Soho, wishing to view them with some friends, I accompanied them. The Rev. James Smirnov, Chaplain to the Russian Embassy, was one of the party. They afterwards dined with me, and on my expressing a wish to increase my collection of maps and plans of rivers, canals and docks, both at home and abroad, Mr. Smirnov was kind enough to say that he would procure those of Russia for me.

In December, 1802, I received a letter from Mr. Smirnov, informing me that he had made an application to Vice-Admiral Mordinoff, who laid it before his Imperial Majesty Alexander I. who was pleased to direct a hydrographical plan of all the Russias, the rivers, and the canals, made and making, and the docks at Cronstadt, to be sent to me, for which I returned my grateful acknowledgments through Mr. Smirnov, sending at the same time various plans of the docks then under formation in London, with hints on commerce, free trade, and the bonding system, to be presented to his Imperial Majesty; and on the 30th October, 1803, I received a letter from Vice-Admiral Chichagoff, acknowledging my letter and the plans; and further stating, that his Imperial Majesty had been graciously pleased to send me a valuable diamond ring, for which I returned suitable acknowledgments. Copies of this correspondence will be found in the Miscellaneous Part, No. 8.

Colonel Waxall, an engineer of merit in the Russian

service, had been employed to make observations on the progress of the London Docks; and on his going to Petersburg to be married, he took with him a model I had given him of the railways and waggons used in those works, which he exhibited in a lecture before his Imperial Majesty.

While in England, he had taken up his abode next door to a public-house in Tower Street, that had been frequented by Peter the Great, for refreshment, upon his returns from working in the King's yards at Deptford, well known by the name of the

“ CZAR'S HEAD.”

This sign had originally projected into the street, at the time when signs were thus hung up. Colonel Waxall purchased it, giving another in exchange for it, which now remains fixed against the house. Wishing to send this sign of the Czar to be deposited in some public archives at St. Petersburg, he requested of me a certificate of its origin; which I gave, having found upon enquiry, that the then landlord or his family had purchased the good-will of the house from the person who put it up, or of the family to whom it originally belonged. On Colonel Waxall's return to England he brought with him a medal that had been given to him by his Excellency Count Romanzoff, after reading his lecture before his Imperial Majesty; and at the same time he requested permission to present it to me, having rendered him, as he stated, some services. The medal was accepted at the moment, but it was afterwards returned, stating that all the different rings, and this medal which he had received from his Imperial

Majesty ought to be kept as heir-looms in his family; and as ladies are the best guardians of their husbands' honours, I requested the medal might be presented to his lady to keep.

LONDON AS IT WAS IN 1793.

Before the making of docks, the accommodation of its trade was confined, for the loading and unloading of ships with the aid of lighters, to the legal quays between London Bridge and the Tower, only about 1460 feet in length, and to sufferance wharfs on both sides the river. The accommodation for the shipping was confined to the space between London Bridge and Limehouse Hole.

The number of vessels entered inwards in 1793 were—

	Colliers	3,500	
	Coasters.	6,473	
			9,973
From foreign parts {	British	2,574	
	Foreign	1,193	
			3,767
	Total	13,740	

Perhaps the best contrast that could be made for London as it was in 1793 is to compare it with London, with all its docks and improvements, in 1836 or 1837, as will be found in the next part.

METROPOLIS
AND
THE PORT OF LONDON,
AS IT WAS IN THE YEAR 1836,
INCLUDING
ALL THE DOCKS, AND OTHER IMPROVEMENTS.

Within the last forty years the metropolis, including the port of London, has undergone a wonderful alteration and increase in extent, population, and commercial accommodation.

It may be stated that the metropolis is the seat of a great empire of legislation and justice, and also of industry, commerce, and revenue; and forms, as it were from its extent and numbers, a little government within itself, with such laws and regulations as are best adapted to promote its interest and welfare. Its inhabitants are generally subservient to laws and regulations, the minor courts of justice deciding quarrels and disputes, with the aid of a well-regulated police.

If strangers are struck with the size and grandeur of the metropolis and its great improvements in the last thirty or forty years, with its parks, gardens, public and private edifices, its churches, public hospitals, charities, and institutions for knowledge, science and arts, with its bridges, docks, tunnel and railways, they ought also to admire, with equal justice, objects that promote their cleanliness, health, comfort and happiness; with markets well supplied; plenty of water; its gas-lights affording beautiful illuminations; its steam-boats; its insurance offices and fire-engines, its commodious pavements and its bared sewers, all of which tend to increase our comforts and security. There is no city better supplied with water or better drained.

If the maps of London at the time of Queen Elizabeth in 1560, and that by Roque, in 1769, be compared with those of the present period, there will be found to have been a very great increase in the size of it; particularly if we include the improvements and additions of recent times; such as Regent Street and Park; the Strand; Trafalgar Square; Pall-mall; Belgrave Square; Waterloo, Southwark, and London Bridges; the cluster of the docks, with all their buildings in the east, and other improvements in Middlesex, Westminster, and Southwark. A tolerable idea might be formed of the extent and number of houses requisite for a population of 1,500,000 inhabitants, allowing about six persons to a house.

The villages, for miles round London, are gradually becoming united to it, and the avenues to the capital are spacious and ornamental.

There are few cities where there are so many benevolent

and charitable institutions for the comfort and assistance of infancy and old age, and of infirm and sick persons.*

Contrasting the trade of London in the year 1793 with that of 1836, without entering into many details, it may be briefly remarked, that London has increased in extent, population, commerce, wealth and power beyond general conception. But wishing to confine points respecting London to trade and its accommodation, it may be briefly stated, that according to accurate documents there were entered for the year

1836	Colliers	8,162
	Coasters (including steam-vessels)....	12,603
	British ships engaged in Foreign trade	3,845
	Foreign ships	1,465
		26,075

* Since writing the above I avail myself with pleasure of an article in the John Bull, of the 5th of March, 1837, as taken from Frazer's Magazine for that month, to which I refer.

Hospitals, dispensaries, infirmaries, and other medical or surgical charities	78
Institutions and schools for the instruction of orphans and other necessitous children (exclusive of parochial, charity, and infant schools)	44
Pensionary, annuitant, loan and other societies	63
Philanthropic societies, asylums, and schools of reform	10
Miscellaneous societies for the relief of the distressed	29
Religious societies and schools	46
Educational foundations and school societies	18

Making an aggregate of 288

Benevolent institutions, some of which are unequalled in the world for

That the importation of coal into London was for the years

1825	Colliers	6,564	Tons of coal	1,856,606
1826	„	6,810	„	2,040,291
1827	„	6,491	„	1,882,321
1828	„	6,750	„	1,960,559
1829	„	6,992	„	2,018,975
1830	„	7,108	„	2,079,275
1831	„	7,006	„	2,045,292
1832	„	7,528	„	2,139,078
1833	„	7,077	„	2,010,409
1834	„	7,404	„	2,078,685
1835	„	7,958	„	2,298,812
1836	„	8,162	„	2,398,352

Being a very great increase over the importation of coals into London in 1793.

This great increased consumption proceeds from the increase of population, the number of manufactories, distilleries, breweries, private and public works using steam-engines, and particularly the supply of steam-boats plying from London to Margate, &c. and outward-bound.

extent, and the munificence of their provisions; which statement may be coupled with the fact, that for the support of education, Bible and Tract societies, no less a sum than £552,376 18s. 2d. (the actual receipt for the years 1835 and 1836) is annually subscribed in the United kingdom.

A Statement of the number of Vessels entered inwards and cleared outwards at the Port of London, for the years 1793, 1835, and 1836.

1793	<i>Inwards.</i>		<i>Outwards.</i>	
	Vessels.	Tonnage.	Vessels.	Tonnage.
Colliers.	3,500	700,000	—	—
Coasters ..	6,473	496,760	—	—
	—	—		
	9,973	1,196,760		
	—	—		
From all other parts :				
British	2,574	498,651	—	—
Foreign.	1,193	177,019	—	—
	—	—		
	3,767	675,670		
	—	—		
1835				
Colliers.	7,958	—	—	—
Coasters ..	12,513	—	—	—
(including steam-vessels.)				
	—	—		
	20,471	2,764,982		
	—	—		
From all other parts :				
British	3,780	740,256	2,884	130,910
Foreign.	1,057	188,983	1,092	197,491
	—	—	—	—
	4,837	929,148	3,976	828,401
	—	—	—	—

1836

	Vessels.	Tonnage.	Vessels.	Tonnage.
Colliers. . . .	8,162	1,650,177		
Coasters. . .	12,730	1,160,701		
	20,892	2,810, 878	11,167	1,115,857
From all other parts :				
British	3,845	772,046	2,964	662,445
Foreign. . . .	1,465	255,875	1,444	257,120
	5,310	1,027,921	4,408	919,565

POPULATION OF THE METROPOLIS.

1811	Males	457,281
	Females	552,265
		1,009,546
1821	Males	570,236
	Females	655,458
		1,274,800
1831	Males	683,059
	Females	788,882
		1,471,941

London may be compared to a great hive, where the drones are as busily employed in trifling life away, as the industrious bees are in collecting honey for their winter store ; and the busy throng from morn to night, and night to morn, are ever on the wing. There is no city where there are so many spectacles, exhibitions, plays, museums, gardens, and lectures as in London, to occupy the time of the wealthy, the learned, and the gay. It has been stated that thirty or forty years ago there were about 200,000 persons passing and repassing London, Westminster, and Blackfriars Bridges in a day ; but what must the floating circulation of a dense population of so great a city as at present, where perhaps there may be above 400,000 persons moving daily by land and water : as an example, I recollect in the summer either of 1836 or 1837, in walking from Gower Street along the New Road to the Bank, I met about thirty omnibuses, and I was overtaken by about twenty going to the Bank.

It is stated in the Morning Post of 2d October, 1837, that within the limits of the three-penny post there are 850 short stages.

In 1826 there were 1,150 hackney coaches and cabriolets.

1828	„	1,200	„	„
1830	„	1,265	„	„

The number at present licensed is 1797.

It may be further stated, that above forty steam-vessels a week clear out to all parts beyond the Thames, or about 2,500 steam vessels per annum, which clear out from the Port of London, exclusive of those that go daily from

Gravesend and Margate, which go many hours in the day, as well as those that ply from London to Westminster Bridge every quarter of an hour in the day.

It has been estimated that about 400,000 persons in a year go from London by steam-boats to Margate and places adjacent.

COMMERCE AND ENGLAND.

It is not intended, in a little tract of this nature, to enter into speculative discussions, but, perhaps, when some other objects are intimately connected with the state of society and our prosperity, to allude to them as points that have contributed to make many changes in the state of England, may not be uninteresting.

England, for its extent, may be considered one of the most interesting and important countries in the world as to population, wealth, agriculture, commerce, and manufactures. Its territory may be divided into tillage, pasturage, woods, forests, with many navigable rivers. Its tillage affords wheat for men, oats for horses, and barley for beer and spirits. It possesses coal, iron, copper, lead, and other mines, and produces wool and timber, and has extensive fisheries. About 961,134 families were employed in Great Britain in agricultural pursuits in 1831. Manufactures, trade, and commerce with other avocations employ the rest.

Since 1763 its tillage and pasturage have increased by enclosures, improvements, and cultivation. Roads, canals, and railways have favoured the above objects, and strangers greatly admire the fertility, verdure, enclosures, and woods in this country.

The population of England may be divided into two classes, the rich and the poor; which, like the oak growing with its growth and strengthening with its strength, are the support of each other, and the wealth of the one and the labour of the other not only contribute to the union and happiness of both, but give vigour and power to this favoured land we live in; and it may truly be called Britain the Great.

There are few countries like ours as to population, civilization, education, industry, morals, justice, and commerce, with such laws for the protection of person and property, and the administration of justice and good order.

It may not be uninteresting in this place to give a statement of the population of England, Wales, and Scotland, taken from Parliamentary Reports for the years 1811, 1821, and 1831.

1811.

	ENGLAND.	WALES.	SCOTLAND.
Males	4,575,763	291,633	826,191
Females . . .	4,963,064	320,155	979,497
	9,538,827	611,788	1,815,688

1821.

Males	5,483,679	350,487	983,552
Females . . .	5,777,758	366,951	1,109,904
	11,261,437	717,438	2,093,456

1831.

Males	6,376,627	394,543	1,114,816
Females . . .	6,714,378	411,619	1,250,298
	<u>13,091,005</u>	<u>806,182</u>	<u>2,365,114</u>

The population of England has much increased within the last sixty or seventy years; but little can be relied upon beyond the Population Returns of 1811, 1821, and 1831.

Agriculture has in like manner much increased, nearly keeping pace with the increase of population; and it will appear that tillage and pasture, under the many inclosure acts passed during the last fifty years, and an improved system of the rotation of crops with the aid of potatoes now to be found all over the country, and other improvements in agriculture, have made a most rapid progress, and have brought an immense extent of country into cultivation for the food of man and beast.

It appears from tables taken from authorities of an early date that the state of production of corn in England was as follows:—

	Davenant, 1700.	Smith's Corn Tracts, 1765.
Wheat. Qrs.	1,750,000	4,046,603
Barley	3,375,000	4,603,272
Oats	2,000,000	4,240,947
Rye.	1,250,000	1,063,652
	<u>8,375,000</u>	<u>13,954,474</u>

It is not intended in this summary statement to give a detail of the present state of grain of all kinds; this is left to those who better understand the subject. Suffice it to state generally, that I conceive that in years of plenty, Great Britain may be said nearly to maintain itself from its own means, and that foreign corn is not permitted to be imported but under certain regulations, and subject to its paying a duty on its importation for home consumption.

It has been sometimes stated, that bullion goes out of the country to pay for the importation of foreign corn; but it will, I believe, be found that the exportation of bullion and its reimportation depend more on the state of the exchanges in our commercial proceedings than on our importation of corn; and that the corn imported into this country forms a part of the payment for the manufactures exported.

It may be further stated, that in general the climate of England is temperate, the people healthy and industrious and much attached to their country. There are few countries where there is so much medical aid and assistance for the rich and the poor, and where, in general, the people remain stationary as to health and longevity for many years without much alteration.

It was a saying of King James or Charles that there were more working hours in the day, and days in the year in England than elsewhere, which may be partly owing to their being fewer saints' days, fast-days, and holidays.

In the register of the population for the years 1811, 1821, and 1831 will be found the number of males and females, marriages, births, and burials, and also a statement of their ages, which will confirm the above represen-

tations ; and from the attention that has been paid to the keeping of the register by various insurance companies, great public benefit has been derived by ascertaining ages and aiding medical men with respect to health and the cure of their patients. Longevity is also to be found in every class of society. There are above forty life insurance companies established in London, under various plans and modifications, but all tend to the great point of establishing the state of health and the duration of life.

There are few countries that have so many natural and acquired advantages as this. Our mines, fisheries, and natural productions are our great sources of wealth. We are ourselves the great consumers of those productions, and likewise the great consumers of our imports, and by the means of our industry and commerce have the greatest intercourse with every quarter of the globe, partly owing to our geographical position and vicinity to the continental ports of Europe. It is amongst our many advantages that England pays great attention to the giving an early education, by parochial, national, and other schools and institutions, to her people, with moral and religious habits, and we owe much of our prosperity and happiness in life to the early impressions we imbibe from our parents in infant years.

It may be also stated, that in this country, as in others, great respect is paid to the rites of marriage, baptism, and burial, and that when these are combined with the blessings of an early education, with habits of order and discipline, they greatly improve the civilization and moral and religious impressions of the people.

The English are much attached to their country, and are great lovers of justice and good faith, and are liberal

in promoting works of public utility. There are few countries where there are so many monumental records of public and private virtue as in England, which serve as examples to the rising generation; and the nation has frequently shown respect to the memory of those who have deserved well of their country, by public funerals or public monuments.

I was lately at Windsor-Castle, which I conceive to be the finest building of its kind for grandeur of style, antiquity, and preservation, in this country; and amongst some of the most interesting of its objects may be reckoned St. George's Chapel, the Waterloo Gallery, and the Gallery of Ancient Armour, which has been fitted up with peculiar taste and chasteness.

In the armory were seen the banners of Marlborough, Nelson, and Wellington.

Nelson, our great naval commander, was buried with national honours, and it is hoped, that when our great military hero shall have terminated his mortal career, he will be buried with equal respect, and that Fame will inscribe the name of Wellington on her tablet as one—

“ Who loved his country
And who wished it well.”

Literature and the arts and sciences are also much encouraged in this country, and may be happily exemplified by the British Museum, whose collections of Egyptian, Grecian, and Roman sculpture remain unrivalled. Its library is extensive, and has lately been enriched by the valuable collection of George the Third, which was presented to the nation by George the Fourth.

The Parliament have recently voted liberal sums for enlarging the building of the Museum, which will, when completed, form a splendid national establishment.

Though we have not so large a building or collection of pictures and statues in the National Gallery as the Louvre at Paris, yet they are annually increasing, and this country happily possesses within itself a great collection of the first masters, and the British Institution is annually furnished for exhibition from the private collections of the nobility and gentry with pictures of ancient masters for exhibition to the public; and we have had for many years an annual exhibition at the Royal Academy of painting and sculpture, by living artists, which does them great honour, and reflects much credit on the Society of Arts for having been the original promoters of the Royal Academy.

The annual exhibition of paintings in water colours is improving every year; and the National Gallery, though at present in its infancy, possesses some admirable pictures of the highest order.

Whilst we are looking at foreign schools of art, England should endeavour to form a school of her own, founded upon the laws of Nature, which are simple, grand, and beautiful.

The British Association may also be mentioned as another instance of the improvement of the times. It is extending its influence, to the great benefit of the community.

In machinery and mechanics, both on a great and on a small scale, we are unrivalled.

There are few countries that possess so much valuable statistical knowledge as Great Britain, from her parliamentary and other reports and publications on the state of

agriculture, commerce, manufactures, and science, both theoretical and practical, from which this country has derived the greatest advantages. A further reference may be made to Campbell's Political Survey of Great Britain, published in 1774, which contains an important statistical account of different parts of Great Britain at that period. Reference may be also made to Davenant, Adam Smith, Colquhoun, Tooke, M'Culloch, M'Queen, and other able writers on political economy.

Without touching upon the system of poor laws, which forms one of the most important and intricate concerns in the whole scale of political economy, and which is now under a great public experiment, it may be stated that the introduction of small allotments of land, let out at an easy rent to the industrious and labouring class of society, has afforded great aid and relief to those that would have been much distressed if it had not been for such resources ; and no less than 75,000 families have adopted this plan with a prospect of a great increase as stated by "The Labourers' Friend." This system, with the aid of Savings' Banks, will, it is hoped, promote industry, and increase the comforts and improve the morals of society.

When our commerce was in its infancy it might have stood in need of prohibitions, bounties, props, and fences ; but it has taken so deep a root in our soil that it promotes agriculture and manufactures, and we can bear a storm without much apprehension, and may lessen many of our restrictions and prohibitions without injury. We owe much of our power to agriculture, manufactures, industry, and commerce.

This is not an opinion of a day, but was expressed in a letter written by me to Whitshed Keene, Esq., M.P., who,

as one of the Committee, favoured the formation of Docks in London in the year 1796, and of which the following is a copy:—

London, 17th April, 1796.

Whitshed Keene, Esq., M.P., &c. &c. &c.

SIR,

Permit me to request your acceptance of three little pieces respecting questions of great public utility, that were drawn up without much time for arrangement or correction.

The Letter to a Friend embraces objects of great moment beyond the simple Port accommodations of Docks, and were detached hints suddenly thrown together at his request, who wished them committed to writing without delay. The letter has so many marks of haste about it that I now almost repent its having made its appearance in its crude state; but I hope objects and intentions will apologize for its imperfections.

With respect to the question you asked yesterday, as to the extent of our commerce, and what proportion of our exports were the effects of a depôt, I beg to say that our commerce is of a peculiar nature, and that our great lines of imports lie in a few leading articles and the products of a few countries. We are the great importers and the great consumers of those imports, such as tea, wine, sugar, &c., and of those imported, such as require the hand of industry to bring them into circulation. We are also our own great customers. While we are looking with wonder at the great increase of our foreign trade, I look with greater astonishment at the extent of our home consumption, which makes me almost incline to doubt on many

of the generally received opinions about commerce ; and that we must possess peculiar natural advantages to be able, with so few native products in return, to command such a commerce as we do, both as to our imports for consumption and our exports. I conceive that the great blessing which preponderates in our favour are our coals, iron, lead, tin, and copper, our industry, and the great security to property.

Of our foreign trade, our exports consist of a mixed assortment, and may be divided into three parts. The first, consisting of foreign produce in the same state as imported ; and when we are merely the *depôt*, waiting for the advantages or competitions in markets, with all accumulated benefits of freights and charges that attach themselves to the import and re-export of such articles as tobacco, rice, and India goods.

The second, foreign products that undergo manufacturing. To these we attach a portion of the labour and industry of this country, which forms no small part of our capital, and which enables us to import and consume to the extent that we do. To ascertain the value and extent of our trade has been and will always be an imperfect thing ; and we must only judge of it by its influence and effects, and in proportion as we encourage commerce we increase wants and the means of supplying them.

Not returning home till late last night prevented my sending the paper I promised sooner, and I remain,

Sir,

Your obedient and humble servant,

WM. VAUGHAN.

London is the metropolis of the kingdom, and is seated

at the head of a fine navigable river, nearly ninety miles from the sea ; commanding the greatest portion of the commerce of the kingdom ; and has an easy access to every port of England, and other parts of the world.

Liverpool is next to London in commercial objects. It is situated in the middle of a great agricultural and manufacturing district, and commands an extensive and increasing commerce with Ireland and America, and all foreign parts.

In the article of cotton only, Liverpool now imports from 1,200,000 to 1,400,000 bags per annum, which in a manufactured state by British labour, may almost be considered as a domestic product ; a very large part of which is for home consumption. Its exportation in a manufactured state to America and elsewhere is considerable, and in the shape of twist, forms a great article of export to Germany, Russia, and Prussia.

From the insecurity of the river Mersey, owing to the tides, the whole of its trade, foreign and coastwise, is obliged to resort to docks, to load and unload, and is subject to the payment of dock rates. In the docks ships load and discharge afloat, or in half-tide docks or basins, open to the tide grounding in the latter at low-water.

With respect to the commerce and shipping of London, it is differently circumstanced to that of Liverpool ; and within its port to Bugsby's Hole, it is capable of holding about 1,400 masted vessels at a time, including colliers and coasters, which must lie and discharge in the river. Foreign ships mostly lie at Limehouse Hole, leaving a portion of British and Foreign ships, valuable as to cargo, to resort to the docks at pleasure, which may hold 1000 or 1200 sail at a time.

Bristol has converted a part of the River Avon into a floating dock for the reception of its ships ; making a new cut for the river, and thus giving rise to the remark, that they have an *artificial river* and a *natural dock*.

Hull has also extensive docks for the reception of its trade, having converted the Military Foss, as has been since done at Havre de Grace, into a wet dock ; thus proving the increasing power and influence of commerce.

The four Rivers, the Thames, the Mersey, the Humber, and the Severn, connect and combine with the aid of roads, canals, and railways, the various manufactures with our Foreign trade.

It may be interesting to state an account of the official value of the imports into and exports from Great Britain in the year 1836 ; distinguishing the trade with France and the United States of America from that with other parts, and without comment.

1836.	IMPORTS	EXPORTS
	Into Great Britain.	From Great Britain.
France	3,115,452	2,338,972
United States	10,918,835	15,017,625
Other parts	41,765,396	80,861,217
Total to all parts ..	£55,799,683	£97,217,814

To which may be also added a summary statement of the imports and exports to and from the United States, with all parts ; distinguishing the proportion of the value of the commerce with Great Britain and France respectively,

taken from official documents for the following years, each ending the 30th September. The dollar may be valued at 4s. 6d. and the tables speak for themselves.

YEARS.	IMPORTS.	EXPORTS.
	Dollars.	Dollars.
1829	74,492,527	72,358,671
1831	103,191,124	81,310,583
1833	108,118,311	90,140,433
1834	126,521,332	104,346,973
1835	149,859,742	121,693,577
1836	189,980,035	128,663,040
1837	140,989,217	117,419,376
1838	112,000,000	103,136,000

N.B. The return for 1838 *not official*.

The falling off in the amount of Exports and Imports, since 1836, has been occasioned by the deranged state of the trade and currency since the commencement of that year, and is now reviving.

Of which to and from Great Britain.

YEARS.	IMPORTS.	EXPORTS.
	Dollars.	Dollars.
1829	25,279,489	24,291,693
1831	44,093,717	32,989,519
1833	37,845,814	32,303,450
1834	47,242,807	44,212,097
1835	61,249,527	52,180,874
1836	78,645,968	57,875,213
1837	44,886,943	54,583,570

Of which to and from France.

YEARS.	IMPORTS.	EXPORTS.
	Dollars.	Dollars.
1829	8,838,978	11,749,395
1831	14,065,743	9,164,802
1833	13,431,678	13,772,221
1834	17,141,173	15,508,974
1835	22,915,376	19,751,244
1836	36,615,417	20,939,100
1837	22,083,614	19,690,578

It may be further stated, that the discovery of America has produced some of the greatest changes ever known in the history of the world. It has led to conquests and settlements in various parts of that great continent; and England was amongst the foremost to avail herself of the advantages to be derived from it. Amongst other events in more recent times, the war in 1756 and the peace of 1763 were productive of great and important results to this country. It gave tranquillity and security to the British colonies, and added Canada to our foreign dominions, as well as many acquisitions in the East and West Indies. The result of this war produced an increase of our ships, colonies, commerce, and revenue.

The war with America commencing in the year 1775 was followed by that with France; which events were revolutionary as to government, dominions and commerce. The war with America ended in its Independence, in the year 1783; but by subsequent events, our intercourse with the United States has produced a still greater revolution by the extension of our commerce, compared with the loss of our colonies.

France, jealous of our dominion at sea, and of our marine and commerce, aimed, with the combined fleets of its allies, to destroy our naval superiority.

But the engagements of Rodney, Howe, Duncan, St. Vincent, Nelson, and others, destroyed their naval force, and left their colonies and commerce unprotected; which tended to increase our commerce, and led to the improvements of the port of London.

The Americans, after their Independence, carried on much of their commerce with our colonies; which trade was chiefly composed of British and American manufactures, either on their own account, or as a neutral power to carry that commerce into their own ports; or else into English ports, as places of security, during the war, until they could be dispatched, with safety, to the continental ports of Europe, and then to be realized or re-shipped. The English cruisers made many captures, and brought in many ships for detention and adjudication; thus raising many intricate points in our Admiralty Courts, respecting neutral property and ships. Buonaparte, wishing as much as possible to prevent all intercourse with English ports, attempted to blockade almost all the ports of Europe against the trade of England in every shape, in order to depress it.

This produced a reaction, by the introducing of Orders in Council, neutral bottoms, and false papers, with high insurance at thirty per cent. against every risk. Many of these were taken or seized in port, and others arrived safe at their place of destination. In both cases the continent received supplies.

All these changes had a tendency to infringe on, or break down the policy of our navigation acts, and ulti-

mately to mitigate the rigor in the observance of them, prior to the general peace of 1815.

In 1815 the ever memorable battle of Waterloo (when the Duke of Wellington with the aid of the allies completely defeated Buonaparte) created another great change in the state of things, and gave peace and tranquillity to Europe. Armies turned their faces homewards, seeking employment by agriculture, manufactures, commerce, and domestic objects, encouraging industry to create property and produce revenue. This new situation of things created yet still greater changes in our commercial relations and treaties; decreasing the system of prohibitions by a mutual exchange of a more liberal nature, either in the reduction of duties, or trading upon more liberal terms. The countries of Europe by a long peace have increased their own advantages and comforts; and as they increase in population and wealth, they will also require fresh wants; and in the means of supplying them, England will have little to fear in a great scale from rivalry, having so many natural and acquired advantages; and by improving upon herself, she may still retain her power, influence, and prosperity.

It may be further observed, that England has improved upon its own discoveries, and has encouraged voyages for the increase of knowledge and science; and has also paid great attention to the civilization of other countries by the means of Missionaries, and the circulation of the Bible to all countries through the agency of religious societies of all denominations. Further information on this head will be found in the Miscellaneous Part.

The Tree of Knowledge is so deeply rooted in the soil

of this country, as to be favourable to the pursuit of the arts and sciences in all their branches, and to the education of the mind ; and the fruits of industry have given wealth, greatness, and power to England, and we may conclude by saying,—

Happy, happy England ! Sea-girt Isle ! May she long remain, the living monument of her own fame, and may other nations follow her example !

MISCELLANEOUS PART

ON

VARIOUS SUBJECTS.

MISCELLANEOUS PART,

ETC. ETC.

No. 1.

NAVAL COMMUNICATIONS.

To Mr. Sewell.

SIR,

Your useful Magazine having engaged the public attention to a great national object, the importance of Naval Architecture both to our Navy and our Commerce, I am encouraged, from the reception you gave a little piece on that subject in your Appendix to your Tracts on Naval Architecture, to submit the following Hints to your consideration respecting *Inland Navigation*, from an old Correspondent. Both objects have an intimate connection with each other; and Great Britain owes much of her power, prosperity, and welfare, to the encouragements given to them. These Hints were written about two years ago for a particular object; and if encouragement is

given, I hope to see a Society formed for the Improvement of Inland Navigation, similar to the one that has been instituted for Naval Architecture. What is here suggested, may be useful to a numerous class of your readers who have not an opportunity of perusing larger works, containing in many respects similar information. You have already given us one proof of your readiness to invite communications on useful projects; and I am persuaded you will be equally so, on another that may be no less useful to our internal interests and resources.

London,
July 1, 1792.

I am, SIR, yours,

A. B.

HINTS AND QUERIES ON INLAND NAVIGATION AND CANALS.

A pamphlet, entitled “ The History of Inland Navigation in England,” published some years, having been long out of print, and it being proposed to re-publish the same with improvements, and to continue it to the present time, the following Hints and Queries are submitted for consideration :—

The Duke of Bridgewater’s Canal, begun in 1759, occasioned many similar projects; and so great has been the spirit excited, that the Legislature have passed no less than thirty-eight Acts of Parliament for the making or perfecting of Canals, or for improving the Inland Navigation of this country. Many of these undertakings are finished; some have failed, and others are at this moment carrying into execution. A complete history of them, stating their particular objects, their extent, and their

effects, cannot but be interesting to the public, who have been so much benefited by them.

There have been, perhaps, few objects of internal policy that have so much called forth the powers and resources of the country as Inland Navigation. Rivers and Canals are to a country, what arteries are to the human body. They aid agriculture and manufactures, and create new markets while they extend old ones. Inland Navigation has not only been the means of enlarging our foreign commerce, but of giving birth to an internal one ; which, with all our predilection for foreign commerce, has far exceeded it in extent, value, and importance. The influence which this Inland Navigation and Commerce has had upon our industry, population, and resources, has been so great, as in many instances to have changed the whole appearance of the countries through which Canals passed.

The reasons are plain. If we appear as consumers, by means of Canals we are enabled to import more cheaply ; if as producers, we add facility both to imports and exports. If the materials of a manufacture lie dispersed, Canals unite them, and at the same time supply the persons concerned in the manufacture with all their necessities on the cheapest terms. The land-owner, whether as possessing the surface of the land or the mines below it, necessarily finds his advantage from new markets, and from having a cheaper carriage both for his manure and his productions. The intrusion upon his pleasure-grounds he may the more easily forgive, when he recollects the gain in return to his estate, his frequent absences from his country residence, and the many defeats in Parliament which Canal-undertakers in general have experienced, *solely* on this account. Perhaps it may be laid down, as a gene-

ral rule, that every Canal-Bill ought to pass in Parliament, when guarded in the usual manner, unless it does an unfair injury to another better Canal. The gain belongs to the public, the risk to the individual.

The experiment of Canals has now been made for some years, and to an extent, perhaps, of seven or eight hundred miles, and in most cases to the advantage of the public, even to the increase in many instances of land-carriage as well as navigation by sea.

In some parts of the country prejudices still prevail ; and the popular objection, that Inland Navigation destroys our nursery for seamen, has frequently influenced the minds of those who were not biassed by any particular local interest. If in some instances the Coasting Navigation may have been lessened by it, in others it has been increased ; and there can be no doubt, that a great extension of our distant navigation has arisen from a system which has in effect converted the internal districts of our Islands into COASTS. The security to the communications of the parts of the country one with another during the tempestuous months, and in time of war, which is afforded by Canals, is another advantage to be added to that of their cheapness compared with land carriage. The barge and boatmen, though they have little experience in boisterous seas, are by no means unacquainted with the art of managing and loading vessels, and they frequently find their way to our sea-ports, and thence into our navy. If Inland Navigation may be supposed to form but few navigators for the sea, no lives are lost in these calm elements ; the diseases of hot countries, so destructive to our seamen, are also unknown in them ; and they admit of no desertion, whether in peace or war, to foreign services, there to

be employed by our rivals and enemies. In short, the abundance of fresh-water rivers and lakes in a country has never been thought a detriment to its navigation, but the contrary: and there seems no reason for supposing artificial Inland Navigation to be in this respect at all more injurious. Besides, we are not always to judge of the benefits of commerce, agriculture, and manufactures, from instantaneous effects and consequences. Though they may not in direct lines be immediately productive, yet when taken in the greater outlines, they frequently in their returns and collateral branches aid and assist each other, by giving employment, circulation, and wealth.

When the history of Inland Navigation, and the spirit of industry and commerce come to be better understood, and popular prejudices decline in their influence, the accuracy of these doubts respecting the utility of Canals, &c. will be questioned. If we object to Canals, we may admit the same claims against the use of machines in our manufactures, and implements of husbandry in our agriculture. The cheaper we can invent, labour, and transport, the better we can contend with foreigners, and the more hands are left at liberty to new calls, which a general spirit of improvements and wants create; Ingenuity always proving itself the helpmate of Industry. The present growing state of our agriculture, population, internal and external commerce, is the strongest proof of our gaining ground; notwithstanding our incumbrance of debt, taxes, and dearness of labour.

There are two countries in particular, China and Holland, that have systematically encouraged Canals and Inland Navigation at the *public expense*. Neither of them want wealth, population, or employment; and Holland abounds

in navigation, as would China also, if her policy did not render her averse to foreign commerce. France has not been deficient in public undertakings of a similar nature. In England, the zeal of individuals has had a public sanction, but the undertakings have been at *private expense*. We build palaces for our public offices; and at an immense expense subsidize foreign troops in peace and war for objects of vain glory; or to balance hostile powers, in a manner oftener suited to our caprices and passions than to our interest; but we do not sufficiently cultivate those seeds of convenience, comfort, and industry, that would shoot out into permanent strength, wealth, and revenue at home. A time may come when the general system of all Governments may look more to the encouragement of such public undertakings as will tend to population, happiness, and improvement, in a degree far superior to our present ill-judged expensive systems.

The object of the intended publication should be to give a history of what has been done; to remove prejudices, and establish information and encouragement in favour of future undertakings. The following Queries and Hints are submitted, among others that might be suggested to the public. The information, plans, and hints of Engineers, of the Agents of Canals, and of private individuals, on the subject should be invited. The Queries and Hints are all numbered, to save trouble; and the Answers made may refer to these Numbers.

The history of Canals and Inland Navigation should not be confined to England, or even Scotland or Ireland; but it should embrace those of other countries where they have been extended.

London, September 15, 1790.

QUERIES, HINTS, &c.

- I. Plans of Inland Navigation as originally projected; and how far they have been carried into execution to the present time; denoting particularly if any deviations; and when those at present incomplete, are likely to be finished.
- II. The causes or objects of each particular Inland Navigation having been undertaken, and the degree in which the execution of the event has corresponded with them.
- III. The nature and extent of traffic carried on upon these navigations.
- IV. The different productions and manufactures of those places, and their neighbourhood, through which the Canals, &c. pass; or with what canals or rivers they communicate.
- V. The effects which Canals, &c. have had upon the manners, industry, manufactures, population, agriculture, and mining, of the different countries where they have been found, especially compared with others similarly circumstanced; and also the cheapness and facility with which markets have been supplied, compared with former times.
- VI. How far the value of lands, rents, and labour, together with taxes and rates, have been affected by them.
- VII. The number of people, horses, &c. supposed to be

employed by, or in consequence of, the traffic on Canals, &c. especially compared with the former state of things.

- VIII. The length, breadth, and depth of Canals; also the form and size of them best adapted for use, permanency, and economy.
- IX. The fall of water on each Canal or Inland Navigation, and the number of locks made or intended.
- X. What have been the improvements made in the system of locks, inclined planes, sluices, bridges, &c.; and how far they are still capable of improvement?
- XI. How far Canals are expensive in their repairs; and the best remedies to prevent or remedy accidents or damages.
- XII. The prime and annual cost, and the revenue and other profits to undertakers, in the cases of Inland Navigations, compared.
- XIII. The tolls actually collected, compared with the accounts limited by the different Acts of Parliament.
- XIV. The quantity of tonnage used upon Canals and improved Inland Navigations estimated *per annum*; with the size, forms, and draught of barges when loaded.
- XV. What is the distance, time, and expense of conveyance, respectively, along the Canals, &c. to the four great extremities, *viz.* London, Bristol, Liverpool, and Hull; or as far as goods can be water-born to and from each place; and the same for intermediate distances?
- XVI. What is the time, distance, and expense of land-carriage in the above cases; and where the water-carriage terminates?
- XVII. What is the comparative time and expense, convenience or inconvenience, of land-carriage, in the above

cases, as opposed to that of Canals or other Inland Navigation?

XVIII. What is the time, expense, and damage, accruing in conveyances in the above cases by sea, both in winter and summer; and also the estimated sea-risks in peace, and in war?

XIX. What convenience or inconvenience, of a general, local, or particular nature, has been found to attend Canals and Inland Navigation, especially with respect to health, population, and employment; also the draining or otherwise of the soil, &c.

XX. Whether Canals cannot be made convenient and useful sluices through bogs? and to enquire, How far the experiments making in Ireland have succeeded? with the general observations from them.

XXI. How far Canals can be made subservient to the purposes of agriculture, by flooding of meadows or turning of mills, &c.?

XXII. What contrivances, implements, or machinery, have been employed for constructing Canals and improving Inland Navigation; and what species of boats, barges, bridges, cranes, and other machinery, are now used upon them, or in connexion with them?

XXIII. What curious or instructive incidents have occurred during the course of these undertakings; or what curious and instructive anecdotes respecting the parties in any way concerned in them.

XXIV. What is the best system for management and inspection of the concerns of a Canal or Inland Navigation, whether *formed* or *forming*; and what particulars are most to be attended to or guarded against upon this occasion?

XXV. To invite communications of plans, drawings, models, or explanations of projected or of executed Canals, sluices, locks, inclined planes, boats, bridges, or Canal machinery and implements; and in order to have information conveyed by them as perfect as possible, deviations made, or likely to be made, should be particularly noticed. In Canals there can be little danger of rivalships in communications of this nature, as they are always attached to particular spots, and for particular objects: the advantages of them are local; and when communicating with other Canals, the advantages become more general, both of a public and of a private nature. By a freedom in communication we may gain experience and improve advantages. Even a knowledge of defects, and of the causes of the failure of projects, may not be without their uses.

XXVI. Whether a good map of England may not be made, shewing the state of Inland Navigation, that would be simple in its construction without deranging other objects; the lines between the counties to be plain, and the counties to be distinguished by a few plain simple colours; rivers to be described how far they are navigable by an anchor; and the Canals with three strong colours, to distinguish those executed, executing, and projected. If the mountainous parts of the country were added, with local mineralogical remarks, &c. &c. the attention of the public might be directed to proper objects with some success.

London, September, 15, 1790.

A. B.

NAVAL COMMUNICATIONS.

[Continued from page 8.]

To the Editor of Papers on Naval Architecture.

ON THE PRESERVATION OF TIMBER, ETC.

SIR,

I have read your little collection on Naval Architecture with pleasure, and though no theoretical or professional man, I have annexed what occurred to me on the occasion. If it gives hints to others I shall be happy in the opportunity of drawing out the sentiments of those better informed.

The art of building of vessels has been, in one shape or other, general and common to all nations and ages. Necessity has been the mother of invention; and what accident has discovered, design may have improved. The floating of trees on the surface of the waters may have given birth to the use of boats, and the hollowing of them fit for passage or burden has been an after invention.

Throughout the globe we discover a promptness and similarity of manners that is singular. Man differs but little from man in his inventions for the common purposes of life: climate and products may vary, but he soon learns how to adapt them to his wants and uses. This is peculiarly verified in the art of ship-building in all its various gradations of pettiaugers, proas, boats, sloops, &c.; the knowledge and use of them is general. In many countries or islands we find vessels used that have been only

scooped or burnt out of single trees. The ribbing and planking of vessels, with the use of sails and oars, and their size, construction, and materials, have varied and improved in proportion to the conveniences and accommodations of the several climates in which they have been found, and they have been well adapted to the occasions and wants of man in his most untutored state.

Though this system and principle has been the same, it has belonged to civilization and to commerce, among the more enlightened nations, to extend their ideas as their wants have increased; and ship-building, with all its improvements, is now become one of the greatest efforts of man in his most cultivated state. Notwithstanding our skill, we have yet much to learn, by the application of general principles to many points that have a near relation to the art of ship-building. It is not perhaps so much a question how to invent or make a floating body, as how to govern that floating body in all its varied forms by some common principles, under all given circumstances of burden and despatch in the elements they have to contend with.

From the want of uniting theory more with practice, the inquiries of our men of science have been very limited and much confined to the speculations of the closet. To become more useful, their pursuits and knowledge should be applied more to the result of experience. Our practical men have neither leisure or ability to follow up abstruse or abstracted speculations; and it may be admitted as a doubt, whether inventions and discoveries, with the improvements upon them, have not been more rapid from among practical men than from those who have had no experience beyond a speculative and theoretical education. A time may come when our attention to the higher classes of mathematics

and philosophy may lean more to points of practical utility; and perhaps none is more capable of study and inquiry than ship-building and navigation, with all their collateral branches dependent upon utility, health, and accommodation. The French have employed some of their best Academicians to write on these subjects, and with much success; and the ships they have built are strong proofs of the attention they have paid. We have built from their models, and improved upon them.

No ships have differed more from each other than those which have been built upon the same models; and so much do little causes frequently produce the greatest effects, that the same vessels have been made fast or dull sailers only by a difference in the size and positions of masts, sails, and yards, the mode of stowage, and of carrying of sail. Ships are like men, and their tempers are to be managed alike; they are tossed to and fro, the one by the elements, and the other by the caprice of passion. In ships, much will depend upon the construction, but much more perhaps upon management. Each size will be found to have a proportion peculiar to itself, and adapted to the nature of the service to which it is intended. Fishes are of all sizes, forms, and constructions, each class having its own proportion, and yet all enjoying the same common properties for the element for which they were intended. Ships are of a more complicated construction, and have at all seasons to contend with two elements, which are often at variance with each other, and are then more the governed than the governing power.

Though much attention has been paid to the choice, age, cutting, and seasoning of timber, and the mode of preservation, both in the primitive state of timber and

when worked up into shipping, yet an increasing attention may create fresh discoveries; and as a few hints may lead on to others, the following are submitted for that purpose.

In Sweden, a complaint was made that the timber floating and seasoning for the use of their navy was frequently infected with the worm. Linnæus, on being consulted, found that an insect deposited its eggs in the timber; he recommended the floating of the timber under water during the season that the insect laid its eggs. The advice was followed and the evil remedied.

The following extract of a letter from a gentleman of considerable philosophical observation, and whose situation gave him great opportunities of hearing the proposals and projects of others, having found its way into some circles, contains so much useful information, that a liberty is taken in the transcribing of it.

“ A man who had been formerly concerned in ship-
“ building, but for thirty years past has been a bridge-
“ builder, had early in life observed, on examining worm-
“ eaten ships, that the worm never eat within the seams
“ where the caulking-chisel and the oil, &c. entered. He
“ had observed that the whaling-vessels would be eaten to
“ a honey-comb, except a little above and a little below
“ water, where the whale is brought into contact with the
“ vessel, and lies beating against it till it is cut up. A
“ plank lying under water, at a mill of his, had been
“ obliged to be renewed annually, because eaten up by the
“ worm within the course of the year: at length a plank
“ was accidentally put down, which for some purpose had
“ been thoroughly impregnated with oil; it remained
“ seven years without being affected. Hence he took the

“ idea of heating the timber as much as possible, and
“ of impregnating it in that state with the liver-oil of
“ the cod-fish. He had practised this for thirty years,
“ and there was no instance of the worm attacking his
“ timbers, while those in neighbouriug places were imme-
“ diately destroyed. He had used the liver-oil of the
“ cod because very thick, and therefore, as he supposes,
“ more permanent in its effects ; he supposes some other
“ oils might do, but cannot speak of them experimentally.
“ He says there will be no difficulty in heating the planks
“ of a ship, after they are put on, as well as before ; but I
“ do not recollect his mentioning ever to have tried it in
“ the case of a ship.”

In America it is not uncommon to bore a hole at the end of timbers and pour oil into the same, from whence it soon disperses itself throughout the pores. They also apply salt between the ribs with great success. Salt-ships are known to be well-seasoned and lasting.

As the navy makes so formidable a part of our power and of the ship-building of this country, it would be a proper question to know the proportions best adapted to each rate, so as to combine burden, sailing, fighting, and accommodation for men ; attending also to the size of masts and construction of sails. It may be also admitted as a question, What sized vessels are best calculated for the transportation of troops, with respect to health, safety, despatch, and national economy ?

It would be an object of moment to devise some plan for the better preservation of timber between wind and water ; to consider of the best mode of sheathing, coppering, and paying of ships' bottoms ; and what is the best preservative against the worm and foul bottoms, when

ships are not coppered. Whether coppering of the navy has had any effect upon the timber? and whether, when in ordinary, it would or would not be advisable to let them remain in that state? Whether from the great wear and tear of a ship being principally confined to its upper works, by constant straining and exposure, it might not be advisable to strengthen those parts by additional beams and making the timbers in parts stronger? What would be the effect of laying double floors or crossways?

As ship-building forms so large a proportion of the wealth and the power of the country, the thoughts of scientific men might be turned more to the art itself, when connected with all its collateral branches; it might also be made more a part of nautical education.

At Barcelona, in Spain, (a country none of the most public-spirited in these points,) an academy is established for the noble arts, and open to all the world, where all who attend are taught, gratis, drawing, architecture, sculpture, &c. There are seven halls, and one of them has a nautical school, where every thing of tables, paper, and masters are provided at the public expense; it has already turned out above 500 good pilots. Government here, without making expensive establishments, might give encouragement and circulate information by useful books among all the lower and younger classes of officers and men.

Societies might be formed and premiums given for the best nautical and practical essays on the various branches dependent on navigation.

Medals might also be struck for successful candidates, as honour with some may prove as great a spur as pecuniary reward.

Accounts might be invited of the numberless accidents that have arisen occasioned by shipwrecks, loss of masts, rigging, sails, and rudders, and also from leaks and short allowances of provisions, with the remedies and substitutes that have been applied. A selection of them might be made for the use of the navy and merchant-service, which might serve as a vade mecum in moments of distress and danger; and to a work of so much utility and humanity the Admiralty might perhaps be induced to give encouragement and information. The loss of rudders and remedies applied might be instanced in the case of his Majesty's ship the *Lion*, Captain Cornwallis. The losses of masts and sails are innumerable; and it is some comfort to those in such distress, to observe that ships under jury-masts seldom founder but ride out the storm like other ships; and if they do not make such despatch in their voyages, they never invite danger by a press of sail. Seamen should be impressed with the danger and folly of deserting ships on the first alarm, when compared with the still greater risks they run from open boats in the middle of the ocean, and with short commons and no port at hand; also that ships have been frequently brought into port when deserted by crews, and that others have been lost only because they have been deserted. A seaman should never abandon hope—it should be his motto as well as his sheet-anchor; he should be strongly impressed with the idea that the buoyancy of a ship in itself in all cases will keep her long afloat when leaky; that ships will even swim when the water within is almost level with the sea without; that cargoes in themselves are frequently buoyant; and that if of a perishable nature, the packages may, however, add to that buoyancy. The preservation of

the Guardian man of war, Captain Riou, is a wonderful instance of hardships, perseverance, and safety. The narratives of Captains Inglefield, Bligh, and Wilson, with many others, might be brought to encourage confidence and banish despair.

It might be recommended to officers and seamen to encourage among themselves more the professional knowledge of the pilot. We often find expeditions and voyages retarded or defeated from the want of a knowledge of coasts and soundings, and the trusting always to men or pilots when the former cannot be procured.

It might be also a useful project to oblige all captains, on clearing out their ships from our several custom-houses, when paying for lights, &c., to take with them printed directions and drawings of our light-houses along the coasts with their bearings; the expense would be only a few shillings; it would circulate information and save many vessels that are lost, both outward and homeward bound, from ignorance or want of pilots. Under the patronage of Government and the Trinity-house, other countries might be induced to make a mutual exchange of papers and information.

Health to seamen is a great point of nautical importance, and with all our precautions hitherto, it is still capable of further improvements. Had Captain Cook's voyages been only undertaken with the idea of experiments as to health instead of discoveries, they would have proved a national object and a blessing to society, by adding to the lives, health, and happiness of a useful class of men both to the navy and to commerce. Seamen are as prodigal of their life as they are of their purse; and it is incumbent upon us to add to the security of their lives, when they

risk so much for our wealth and convenience. To guard against short commons and long voyages, ships should be induced to take in a larger stock of provisions than customary, and it would be a happy discovery if we could make some improvement in the salting and preserving of provisions.

Ventilation is another point greatly conducive to health. Ships cannot in all weathers bring their bedding upon deck; and ventilators, as at present constructed, have been rather of a passive than of an active nature. There is a machine, which from its simplicity need not be expensive, that an ingenious man has invented as a cooler in his manufactory; it is on the principle of a winnowing machine in a box open at two ends, with a long wooden trough that might be extended at pleasure; it is worked by one man, and can convey in or out of the hold of a ship good or bad air at pleasure and to a great extent.

I remember the late Mr. Blackburne, the surveyor, relating that when he was at Gloucester the gaol fever chanced to prevail there with great virulence, and the object being to ventilate a small room that held about thirty people, it was effected by the means of a small coach-wheel with little sails, placed in a box over the ceiling that had a funnel to go out of doors; holes being made in the ceiling, the air rushed through with great impetuosity, when this wheel-machine set to work and completely ventilated the gaol. It would be easy, by means of a wheel or some other machine, to ventilate actively the holds of ships in all weathers, and it would be peculiarly serviceable to tenders and transports.

I will not lengthen this letter, already too long, by an apology, but congratulate you by observing that there is

a new-invented patent wheel to pump ships without manual labour, which works, when immersed in the sea, by the resistance of the ship to the sea while sailing; at all times it will be a useful discovery, and particularly so when ships are leaky and their crews are worn down with fatigue and disease. Sincerely wishing well to your scheme,

I am, SIR,

Yours, &c.

A. B.

June, 1791.

ROYAL EXCHANGE ASSURANCE.

[Continued from page 9.]

COPY OF THE VOTE OF THANKS, &c.

At a Court of Directors, London, June 7th, 1820.

“ The Sub-Governor, by desire of the COMMITTEE
“ of INSPECTION, communicated to the Court the follow-
“ ing Resolution of that Committee :—

“ The Governor, William Vaughan, Esq. having pre-
“ sented to this Committee a Report, dated the 29th of
“ May last, accompanied with several Books of State-
“ ments and Calculations framed and arranged by himself,
“ exhibiting results of our operations in the several bran-
“ ches of the Sea, Fire, and Life Assurances and Annuities,
“ down to the 30th of April, 1819, and shewing, in a
“ most clear, perspicuous, and combined view, the state
“ of the Company’s affairs at that period; and it being
“ stated in that Report that it is the wish of Mr. Vaughan
“ that this said Report should be deposited with the pre-
“ sent and future Governors, in order to be referred to
“ when necessary by the Committee of Inspection :

“ The Committee have resolved, and do hereby resolve,
“ to express and record their cordial thanks to Mr.
“ Vaughan for the labour, skill, and judgment displayed
“ by him in framing these valuable books and documents;
“ and do further resolve, that it will be expedient and
“ advantageous to this Corporation that the system and

“ principles on which these documents have been framed
“ by the Governor, should henceforth continue to be ap-
“ plied to all future subsequent transactions in our several
“ and respective branches of business under the superin-
“ tendance of the Governors for the time being.

“ Resolved unanimously,

“ That the Governor be requested to sit for his picture,
“ as a testimony of the high sense the Court entertain of
“ the eminent services rendered by him to the Company ;
“ and that the Committee of Treasury be requested to
“ superintend the execution of the same.”

THE ANSWER.

“ *To the Governors and Court of Directors of the*
“ *Royal Exchange Assurance.*

“ *London, 12th June, 1820.*

“ GENTLEMEN,

“ I request the Court will be pleased to accept my best
“ thanks for the honour conferred upon me, by directing
“ the Resolutions of the Committee of Inspection to be
“ entered upon the Minutes of this Court, respecting a
“ Report and Statements of mine on the concerns of the
“ Corporation up to the 30th of April, 1819.

“ It is peculiarly gratifying to my feelings, that the Com-
“ mittee of Inspection and this Court have been pleased
“ so unanimously to approve of the plans and suggestions
“ in the Report and accounts presented by me, directing
“ the hints and regulations therein suggested to be adopt-
“ ed in all subsequent and future transactions, under the

“ direction and inspection of the Governor for the time
“ being.

“ The accompanying the Resolution with a request that
“ I might sit for my picture, I cannot but accept as an
“ additional token of the kindness of this Court ; and the
“ more to be valued from its being to be placed near the
“ picture of one of the best of men,* whom all loved and
“ respected.

“ I beg to repeat my sincere acknowledgements for the
“ honour conferred upon me; with the assurance that I
“ shall use my best endeavours, in the performance of my
“ duties, to promote the welfare and prosperity of this
“ Corporation.

“ I have the honour to subscribe myself,

“ GENTLEMEN,

“ Your most obedient humble servant,

(Signed) “ WILLIAM VAUGHAN.”

December 4, 1821.

On a Resolution of the Court of Directors of the Royal Exchange Assurance Company that the picture of William Vaughan, the Governor, should be hung up in the Court-Room,

The Governor stated, that he should have been wanting in duty and respect, if he had not returned them his sincere thanks for the honour they had done him by permitting that token of their kindness, now before him, to be honoured with a place in their Court-Room ; an honour the more to be valued from its being so seldom conferred,

* Edward Forster, Esq. Governor.

and rendered peculiarly gratifying to his own feelings from its being permitted to be the humble companion to the portrait of that excellent character who so long and so happily presided over them.

He had now spent the greatest and the most important part of his life in the service of the Company ; a period too long not to be sensible that its interests were amongst his first duties, and the friendships and connexions he had formed had been amongst the happiest events of his life. That he valued their confidence and kindness with gratitude and pride, and would endeavour to discharge his duties to the best of his abilities ; but when he looked at the duties he had to perform, and at the character of those who had presided in the situation which he now held, he felt, and he doubly felt, that a post of honour was not without its anxieties. He had, however, the pleasing satisfaction of having an example before him worthy of imitation. He would endeavour to follow that example, though he was sensible, that with all his exertions, he should stand much in need of all their kindness not to disappoint their expectation.

He would not move for the adjournment of the Court without returning thanks to all the Directors, individually and collectively, for all the kindness and attention he had ever received from them, and begged they would accept of his best wishes for the prosperity of the Company and for their happiness and welfare.

*To the Governors and Directors of the Royal Exchange
Assurance.*

[Continued from page 9.]

70, *Fenchurch-street*,
December 16, 1837.

GENTLEMEN,

The Committee of Inspection on the 7th of June, 1820, having reported to the Court of Directors “ that the Governor, Mr. Vaughan, had presented to that Committee a Report, dated 29th May, 1820, accompanied by several books of Statements and Calculations framed and arranged by himself, exhibiting results of the Company’s operations in the several branches of the Sea, Fire, and Life Assurances and Annuities, down to the 30th of April, 1819, and shewing, in a most clear, perspicuous, and combined view, the state of the Company’s affairs at that period; and stating in the Report that it is his wish it should be deposited with the present and future Governors, in order to be referred to when necessary by the Committee of Inspection; and the Committee having resolved to express their cordial thanks to Mr. Vaughan for the labour, skill, and judgment displayed by him in forming these valuable books and documents; and that it would be expedient that the system and principles with which they had been framed should be applied to all subsequent transactions of the Company, under the superintendence of the Governors

“ for the time being. And the Court of Directors having
“ been pleased to approve and adopt the recommendations
“ of the Committee, and having been further pleased to
“ resolve that Mr. Vaughan be requested to sit for his
“ picture as a testimony of the high sense the Court
“ entertained of his eminent services.”

I was encouraged to extend my labours to the formation of a more comprehensive and consolidated statement of all the Company's affairs from its first commencement in 1720 down to the year 1824, to which I afterwards added accounts for some of the branches to 1827.

On my resignation in 1829, many of the Statements being unfinished or requiring some revision, I retained the books in my possession to complete them, which various circumstances prevented me from doing till a few months ago.

The accounts, I trust, will be found pretty correct and serviceable, and I beg now to present them, that they may be deposited at the office for the use of the Corporation, as at first intended.

In framing these accounts I have rather aimed at making them conform to the system and practice of the office than at making any alterations.

A copious Index has been given in each of the volumes, but they have been so arranged in the seventh volume, which contains the Final Report, as to consolidate them for each branch.

With the accounts, I have returned all documents which were in my possession; destroying all other papers excepting those thanks which I have received, and which I shall ever retain a grateful sense of.

Sincerely wishing prosperity to the Company, and every happiness to all those who preside over its affairs,

I have the honour to be,

GENTLEMEN,

Most respectfully,

Your sincere and humble servant,

WILLIAM VAUGHAN.

A letter of thanks was returned by the Court, dated 20th December, 1837.

No. 4.

AN ADDRESS

TO

THE BRITISH SEAMEN

AT THE

TIME OF THE MUTINY AT THE NORE, 1797,

BY

WILLIAM VAUGHAN.

[Continued from p. 13.]

Every lover of his country has seen, with concern and regret, that spirit of mutiny which has lately discovered itself in a part of the British navy. The manner and the timing of it have been disgraceful to the promoters of it. It has however been fortunately quelled by the seamen returning of themselves to their duty, from a sense of their own improper conduct. Wishing to cast a veil over the past, and to guard against a return of evils, I beg to address a few hints to British seamen, who have a character attached to them which they should be ever proud to merit, that of being respected at home and feared abroad. The country no sooner heard the complaints of the seamen than Parliament redressed their grievances, and immediately voted an increase to their pay to the amount of about £530,000 per annum to the public.

This was not confined to a particular fleet, but to the whole navy. After such an interposition, and a general

pardon, the late disturbances at the Nore could never have originated from the seamen at large in that fleet, but from the endeavours of the designing few, who misguided the seamen by false representations, and who kept them ignorant of the decision of the legislature, and of the acquiescence and approbation of the country, and of the navy, to that decision. No sooner were the seamen informed of what had been done, and of the detestation that the country entertained of their disgraceful conduct, than they broke through the bands that fettered them, returned to their duty, and delivered up their leaders to be tried by the laws of their country.

I look upon the business at the Nore as a phenomenon in the naval history of this country ; and I can only compare it to a sudden frost, which for the moment congealed every power and faculty of action until followed by as sudden a thaw. Lest there should be still remaining any ice floating, I would recommend to seamen before they again complain,

1st. To look to the navy and the merchant's service of other countries, and see where seamen have been so well paid, so well fed, or so well treated as in this country.

2d. Where they will meet with so many hospitals, public and private, charitable funds and institutions for themselves and families in case of old age, accident, or death.

3d. Whether there are not thousands of foreign seamen who enter voluntarily into the British service in peace and in war, in preference to the pay and the service of the countries to which they belong.

Let seamen then learn to be content, and to enjoy the blessings they possess. Let them rouse themselves to a

true sense of their situation and duty, and be sensible that they cannot better serve their country than to protect it in time of war; and at the termination of it, that they cannot better promote its interest as well as their own than by the exertions of peaceful industry. The nation loves the navy; it is a favoured service; if they have wrongs, their country will hear and redress them with kindness and with justice: but it has a spirit and an energy to suppress violence, tumult, and injustice.

Let them reflect, where will fifty or sixty thousand seamen when dismissed from the navy on a peace, find employment but in the merchants' service? Will merchants and ship-owners confide in men who have discovered a mutinous spirit and a want of subordination? Will they not give the preference to those who can and will work honestly and industriously for their livelihood, and who can have a good character given of them.

Let them also pause, and reflect that our commerce is a perpetual nursery for seamen; and if it should be found necessary, the legislature might by laws and regulations hold out encouragements to good men, to apprentices, and to landsmen, or grant greater privileges to foreign seamen, in order to deter and suppress that spirit of mutiny and dissatisfaction which has discovered itself among the few who will then be left to pine and repent their own misconduct, and at the want of countenance and the want of employment.

Many of the commercial and manufacturing towns of Great Britain have followed the example of the merchants and ship-owners of London; and it gave me infinite pleasure to find their resolutions have been received in the navy with so much satisfaction and effect. The thanks of the

country are due to the officers of the navy and the marines, and also to the great body of the seamen for their steadiness and attachment to their country during the late mutiny. I will not particularize ships or men, from the persuasion that they had rather receive thanks for actual and meritorious services, than from the comparative demerits of a few ships or a few misguided men. I hope the present trials will be a warning to the few misguided seamen who had been ignorantly misled.

Rouse, then, ye British seamen! Go join the brave Admiral Duncan, who with four sail of the line blockades the whole Dutch naval force in their own ports, while a British fleet ingloriously blockades the mouth of the Thames. Blot from the page of history the record of your shame, or a recollection of the transaction, by a return to your duty and by your exertions. It may be in your power to close a war honourably to yourselves, and favourably to your country. Emulated by the examples of Lord Howe on the glorious action of the 1st of June, 1794, and by Sir John Jervis' signal and brilliant victory on the 14th of February, 1797, go seek the enemy off their own ports; and may the laurels you gain secure to us an honourable and lasting peace; remember, however, that the British navy and that British seamen owe their fame, success, and national character to vigour, union, discipline, and subordination, and that without them the navy is like a ship in a storm, without masts or rudder.

THE SEAMAN'S FRIEND.

LORD DUNCAN'S VICTORY.

[Continued from p. 16.]

The active committee appointed to manage the subscriptions raised for the relief of the wounded, and the families or relations of those who were killed on board the fleet under the command of Admiral Lord Duncan, in the action of the 11th October, 1797, made a general statement on the 9th of July, 1801, of the total amount of subscriptions received, including dividends thereon; and the total amount of gratuities and annuities paid to those who were killed, and to the families of those who were severely wounded; giving at the same time a list of the names of those who had not been found, to whom gratuities had been voted, whether British or Foreign seamen. The gratuities to Foreign seamen that could not be found out, after advertising, and allowing twelve months, were voted to the consuls and heads of churches of the different nations to which they respectively belonged, for the benefit and relief of foreign and distressed seamen that may frequent our ports in time of peace. Out of the lapsed sums, 200 guineas were presented to the Merchant Seaman's Office, the Marine Society, and Naval Asylum Greenwich, respectively; as Institutions intimately connected with the welfare and prosperity of the commerce and navy of this country, and as tending to afford in peace and in war, relief and assistance to a number of seamen with their families who have served on board of Admiral Lord Duncan's fleet.

On the 29th October, 1802, the same committee resolved, —That forms of certificates be required of the life, age, and situation of the parties interested, and the number of their families, before they can be entitled to receive their respective annuities; and in case of death, then their widows and children to send certificates agreeably to the forms required; and to prevent unnecessary applications, none were to apply but those who had been in the habit of receiving it; and in case of death the widow or children were to apply under certain certificates and regulations. By information, and assistance of the officers in the navy, and of the magistrates, gentry, and clergy of the United Kingdom and of foreign countries, the number of cases unclaimed and entitled to relief were reduced to thirty-five out of 1,040 cases reported to have been killed or wounded; and if any of the relations of these cases will send the particulars of their claims, attested by the minister and churchwardens of the parish, they would be immediately attended to. Foreigners are equally entitled. If gratuities are not satisfactorily cleared within twelve months, the committee are empowered by the resolution in 1801, to consider them as lapsed.

17th January, 1804.—The committee endeavoured by public advertisements and other channels to find out those foreigners or their families (if any) who had an honourable and a national claim on the funds of this committee for services in defence of this country, and where they have been unsuccessful they have paid over the gratuities which the parties would have been entitled to receive, to consuls or heads of churches of foreign nations. Out of the

funds allotted for British subjects who could not be found out there has been paid to

Greenwich Hospital	£210
The Marine Society, <i>additional</i>	210
The Dublin Hospital	105
The Royal Infirmary at Edinburgh.....	105

as being public and national Institutions connected with the commerce and navy of this country. After performing the business of the day, and regretting the death of Calverly Bewick, Esq., the late chairman, they passed the following vote of thanks:—

“ The Committee at the same time feel it a duty which
 “ they owe to William Vaughan, Esq., one of their
 “ members, to express to him and to the public their sense
 “ of obligations for his unwearied zeal and tried integrity
 “ in the arduous task of attending to the affairs of this
 “ committee from its commencement to its close.”

I remember, upon Lord Nelson coming from Vienna in his way from the Mediterranean, his saying that nothing redounded more to the honour of Great Britain, than the putting Foreign seamen upon the same footing as the English.

No. 6.

OF THE INFLUENCE OF SAVINGS' BANKS

ON THE

HABITS AND MORALS OF SOCIETY.

[Continued from p. 19.]

[This Paper was written for private communication, and was afterwards printed, 31st March, 1818.]

Since the introduction of the Poor Laws in the reign of Queen Elizabeth, there has been perhaps no plan which has held out so many advantages for the bettering the condition of the poor, for increasing their comforts, and promoting their happiness and moral habits, as the system of Savings' Banks.

Though the poor laws might have been adequate for the maintenance of the poor according to the state of society and population at that period, yet these laws, with all their increase of rates, powers, and regulations, have been found every way inadequate to the present state of the country, and the great changes that have taken place in the habits and manners of the people. Notwithstanding the increase of industry, commerce, and wealth, the growth of pauperism has more than kept pace with the advancement of population. The lamentable increase of distress, indigence, and criminal delinquency within these few years has too plainly shown that there must have been something radically wrong and defective in the system of the poor laws,

and that the remedies hitherto applied call for new and powerful aids to correct those evils which have so alarmingly preyed on the morals and habits of society. Savings' Banks may be considered as one of those aids, and as forming a new era in the system of political economy. They create by their operations and combinations a new power of the first magnitude by the simplest of all agents.

It has been stated that the creative powers of industry are to property, what education is to the mind; and Savings' Banks, by bringing industry and frugality into union and action, will put it in the power of every man to better his condition in life by his own exertions. In these institutions he will find a never-failing spur to his industry; a security to property, and a check to many of the evils arising from losses, plunder, and imprudence; and after providing for the common incidents of life, a friendly fund and resource at hand against the day of want, sickness, and old age.

Savings' Banks have established the great leading principles for which they have been founded; and there cannot be a stronger proof of their advantage and necessity, than the great alacrity and avidity with which they have been adopted by every class of society; and that out of the savings of industrious persons more than £600,000 has been invested in Government debentures since the passing of the late Act up to the present time.

There have been but few single deposits in the London Institutions exceeding £50 at a time, and their great bulk as to value and number have been under £5. But when it is taken into consideration, how much has been deposited in the first year of the experiment, out of the savings of industrious individuals who may have hoarded

up funds during the whole course of their lives without use, circulation, or interest, until called into activity by this system; and also how much has been further paid by weekly, monthly, or occasional deposits, exclusive of investments for children, &c. : the depositors of the first class can be of little moment, and are of little detriment to the public.

It might be further added, that every new depositor bringing a new capital into play, produces confidence and example, and affords an additional pledge to the state for the protection and security of property, and for the welfare of society; and that every man, that saves ten or £100 a year out of his income, gains the first perch to independence, and a further removal of himself and his family from a state of dependence and degradation.

When premiums and bounties are granted to encourage fisheries or manufactures, or preserve commercial interests, policy and the welfare of the community have strong claims to promote that laudable spirit of industry, frugality, and independence; which would tend to increase the happiness and comforts of society, lessen crimes and distresses, and in time to decrease many of those great parochial burthens which are oppressive to the rich and the poor.

It may be also stated that Friendly Societies are found beneficial in making a decent provision for sickness or for a man's family after his decease. Savings' Banks are not without their advantages; and by the adoption of both these plans, a man by his prudence creates a fund at all times for the common exigencies of life, and a more decent provision for his family.

Savings' Banks may also prove of the first importance in forming an early provident fund against the day of marriage, by laying up a store towards the maintenance of a family. This would decrease many of the evils that proceed from poverty and distress, which are frequently the causes and accompaniments of unhappy marriages, neglected educations, and increased poor-rates.

These hints have been suggested rather to shew the value and importance of Savings' Banks in a general and a political point of view, than that of entering into more minute and particular details.

Those who are desirous of forming and promoting Savings' Banks, will find ample resources in the reports of the Society for bettering the condition of the Poor, and in a valuable and excellent publication, entitled "The Annals of Banks for Savings."

A FRIEND TO HONEST INDUSTRY.

LONDON PROVIDENT INSTITUTION.

To Sir Thomas Baring, Bart., President of the London Provident Institution.

London, 22d Feb. 1836.

MY DEAR SIR,

The circumstances that prevented my resignation of the situation of Chairman of the superintending Committee of this Institution, at the last and eighteenth general and annual meeting, induced me to wait for the next, about to be held on the 26th inst.

This delay has redoubled my wishes to resign it ; but at the same time with the gratification of witnessing another year's prosperity of this Institution, from its first establishment in 1816 to 1835, At my time of life it is my wish to enjoy that rest and repose which is so congenial to age with its approaching infirmities.

I congratulate you on the present state of this Institution ; and if we were to extend our views to a consolidated statement of the receipts, payments, and balances of all the Savings' Banks in the kingdom, from their first establishment, during the period of nineteen years, to the 20th of November, 1835, with the accumulated number of deposits, they would shew their importance and influence, and that they rank amongst the most powerful agents in the system of political economy, in promoting the welfare and happiness of society.

Savings' Banks may not be unaptly compared to the young sapling thriving in a kindly soil, until it becomes like the sturdy oak of a forest, whose branches give shelter and protection to all who seek it ; and it will be found that industry and temperance combined with economy will tend to promote the happiness, comforts, and morals of society.

I beg to conclude with stating some circumstances connected with this Institution, that may not be very generally known.

That the Society for bettering the condition of the Poor, about twenty years ago, first suggested the plan of establishing Savings' Banks within this metropolis : a meeting was convened, when many of its members, as well as myself, attended, when the plan was adopted, and the society gave the sum of fifty pounds each to this and to other societies towards their expenses.

This Savings' Bank repaid that sum, and a further private subscription, from some of its members. The prosperity of the Institution stands as stated in the report.

You were selected to be the first President, and I am happy to state that your name has long been enrolled as a member of the Society for bettering the condition of the Poor.

With great respect and regard

I remain,

Dear Sir,

Your most obedient servant,

(Signed) W. VAUGHAN.

LONDON PROVIDENT INSTITUTION.

At the general Annual Meeting, held on the 26th of February, 1836, Sir Thomas Baring, Bart. President, in the Chair.

A letter from William Vaughan, Esq. Vice-President of the Institution, and Chairman of the Superintending Committee, addressed to Sir Thomas Baring, Bart. and containing his resignation of the situation of Chairman of that Committee, having been read,

Resolved unanimously,

That this meeting desire to express their unfeigned regret that William Vaughan, Esq. should feel it necessary, in consequence of his advanced age and consequent increasing bodily infirmities, to retire from the situation of

Chairman of the Superintending Committee of the London Provident Institution.

That while this meeting tender to Mr. Vaughan their grateful acknowledgment of the eminent services rendered to the Institution through his indefatigable zeal, assiduity, and ability; they cannot forget, what must ever remain strongly impressed upon their minds, that he was the author of the Institution, over the government of which he has continued to extend his paternal and fostering care.

Under the influence of these feelings, this meeting desire to return their warmest and most cordial thanks to Mr. Vaughan; and to offer to him their best wishes that he may continue to enjoy many years of uninterrupted health and happiness; and their earnest hope that the reflection of his having by his philanthropic exertions largely contributed to promote the temporal welfare and moral condition of a numerous class of his fellow-subjects, may be to him a lasting source of enjoyment.

That the President be requested to communicate these sentiments to Mr. Vaughan.

Mr. Vaughan sent a copy of the Report to his friend Mr. Rogers, enclosed in the following letter:—

To Samuel Rogers, Esq.

1st April, 1836.

MY DEAR SIR,

I have the pleasure to send you, as an old friend, our last Report of the London Provident Institution, for the

nineteenth year, since its first establishment, up to November, 1835, which I trust will be a gratification to you.

I should be happy if we could have you amongst us.

I am,

DEAR SIR,

Yours truly,

W. VAUGHAN.

To William Vaughan, Esq.

1st April, 1836.

MY DEAR SIR,

A thousand thanks for your remembrance of an old friend, and a thousand more for your communication. There is no brighter page in Homer or Milton, and happy should I be if I could look back on such an achievement as yours. But the glory was in laying the first stone. Are you in want of funds?

Yours, ever,

S. ROGERS.

To Samuel Rogers, Esq.

Fenchurch-street,

4th April, 1836.

MY DEAR SIR,

Yours, of the 1st instant, has been forwarded to me. I received it with much pleasure and also for its kindness.

I leave to poets to chant their thousand thanks in Homeric verse, and content myself in agreeing with you, that letters from an old friend to an old friend are not without their value, as they bring recollections which tend to make age more happy and comfortable. Yours to me gave me double pleasure as it tendered funds unasked in case of need.

In behalf of the 20,908 proprietors of the London Provident Institution I return you their best thanks for your wishes; but they beg to decline your kind offer. They find, that under this Institution, with care, pence may soon be converted into pounds. I have to state that they feel independent in having a stake in the country they live in, and have been enabled to lend, with advantage to themselves, half a million of money to the state. They also find that industry, economy, and contentment go a great way in promoting their comfort and happiness.

Connected as this subject is with the good old Dr. Franklin's maxim, I have the pleasure to send you some of his Golden Rules exemplified in the enclosed little papers, which I hope will give you pleasure.

I am,

MY DEAR SIR,

Your sincere friend,

W. VAUGHAN.

To William Vaughan, Esq.

12th April, 1836.

MY DEAR SIR,

Many thanks for your last communication. Dr. F.'s excellent maxims (more precious than gold) are engraven on my heart, with many things of far less value.

I am,

Yours most truly,

SAMUEL ROGERS.

*To William Maltby, Esq. Honorary Librarian of the
London Institution.*

April 4th, 1836.

MY DEAR SIR,

As you sometimes dine tête-à-tête with poets and bishops, I hope you will favour an old friend with your company, tête-à-tête, though no poet or bishop. I dine at home on Saturday and alone. Bring with you your appetite and budget, and we will discuss the same, and for your dessert we will have Professor Raumer's Account of England.

With great regard,

I remain, DEAR SIR,

Yours, sincerely,

W. VAUGHAN.

To William Vaughan, Esq.

*London Institution,
April 4th, 1836.*

DEAR SIR,

I certainly sometimes dine with poets and bishops, but I can sincerely say that nothing delights me more than a tête-à-tête with an old friend, and I shall have great pleasure in waiting on you next Saturday.

Believe me,

Yours, very truly,

W. MALTBY.

USEFUL HINTS FOR THE LABOURER,

PUBLISHED BY

The Labourers' Friend Society.

POOR RICHARD'S ALMANACK EXEMPLIFIED.

Poor Richard's Almanack, written by Dr. Franklin, contains a volume of useful maxims for the conduct of men in every station of life, and should be hung up in every cottage.

It begins by stating we complain of the taxes by government; but we are taxed twice as much by our idleness, three times as much by our pride, and four times as much by our folly; but if we lessened some of these useless taxes on ourselves, we should feel little from the others; adding, God helps them that help themselves.

These excellent maxims have been fully exemplified by the history of two men, who had nearly the same prospects of success in life, but who, from *different habits*, would probably have come to different ends, if the kindness of the one had not saved the other from ruin and destruction.

John Smith was industrious, prudent, and saving; read his Bible, and paid a due respect to Sundays, and had got on in the world; and when he saw he could afford it, he took unto himself a wife, for economy, comfort, and happiness.

John Careless was naturally kind-hearted, with many good qualities, and had more readiness and activity of mind and body than *Smith*, but was more easily led astray into bad company; with a fondness for dress, and singing a good song, he soon raised himself to be the head of the club at the Red Lion.

He became dissipated; and neglecting his business, it soon forsook him; and, by way of consolation, he took to the use of ardent spirits, to drown his cares, and, as he used to say, to keep up his spirits and to warm his body.

The landlord of the Red Lion, finding *Careless* a useful decoy to bring customers, permitted him to run up a score, and a double one on a Sunday at the skittle-ground; but he took special good care to add another to it for *interest*.

The day of reckoning at last came, and the landlord threatened him if he did not pay off his debts.

Careless had become too indolent to work, and did not know what to do; but at last resolved to apply to his friend, *Smith*, to lend him *ten pounds*, although he did not know how or when he could repay the same.

Smith had a regard for *Careless*, whom he had known at the village day-school; and, wishing to save him from

ruin and destruction, resolved to make an experiment, and, induce him to *make a promise* which if he would punctually perform, he told *Careless* he would lend him twenty pounds on the following conditions:—

First, That he would promise to leave the club and the Red Lion ; compromise with the landlord by the payment of one half his score ; and lay out the remainder of the loan in clothing and tools, and he would find him in employment.

Next, That he should apply his weekly wages for food and raiment, and his savings from over-time should be honourably placed into a savings' bank to redeem his loan.

Third, That if he ever went to the club or to the Red Lion, he should, of himself, put double the amount of his score into the savings' bank ; but if ever he should get intoxicated, he should tax himself *trebly* ; and that he should hang up Poor Richard over his chimney. It should be left to his own honour to keep these regulations.

Careless was at first startled at these conditions ; but an event soon happened which induced him to make the promise.

The landlord pressed for payment. *Careless*, with all his failings, was unwilling to go to prison, and equally disinclined to associate with thieves and house-breakers, or to be transported or hung. He consented to make the promise, and having made it, he kept it.

Careless became sober, industrious, and saving ; and soon paid off his loan, and had five pounds in the savings' bank at interest.

As little habits, whether good or bad, often become greater, he soon found that the power of industry led to

independence, and that, whilst he was working, his very savings turned to gains, and that his deposits were at interest.

It gave a new turn to his mind and to his exertions. He entered his name as a member of a temperance society, and soon lost his cough and dismissed his doctor, which was a further saving. His health became restored ; and he found that industry and clothing produced more food, warmth, and comfort, than all the ardent spirits at the Red Lion.

Careless called upon his friend *Smith*, to thank him for his loan, but still more for his friendly advice ; but he had now still a *further want*, and wished to consult him about it. Seeing his friend *Smith* was well off in the world, comfortable and thriving, with a wife and children about him, he wished to follow his example, and take unto himself a wife, as he could now afford to maintain one.

That he had met with a young woman of good temper and prudent conduct, who he thought would make him happy, and whom he wished to make so ; but he had determined, in his own mind, to keep the golden rule he had practised by *Smith's* advice—that of putting all his savings into the savings' bank, in the joint names of his wife and himself, as the surest mode of keeping from the Roaring Lion.

Careless married ; became industrious and happy ; and, by the prudent conduct of his wife, he brought up his children with good and virtuous habits. He became respected ; and soon lost the character of *Jack Careless*, and became better known by the name of *Careful John*.

W. V.

No. 7.

Extract from the Address, delivered by His Royal Highness the Duke of Sussex to the Fellows of the Royal Society; dated 30th November, 1837.

[Continued from p. 37.]

After the Duke had stated that Her Majesty had signed her royal name as Patroness of the Royal Society, he goes on to say,

“ I now proceed to notice some of the more important
“ events connected with the administration of the Royal
“ Society during the last year.

“ One of the royal medals has been adjudged to Mr.
“ Whewell, for his valuable series of Researches on the
“ Tides, which have been published in our Transactions,
“ chiefly during the last three years. I must refer you,
“ Gentlemen, for a statement of the grounds upon which
“ this decision has been founded, to the more detailed
“ reports of the Council, which will be read to you by
“ your Secretary, Dr. Roget; but I gladly avail myself
“ of this opportunity of expressing my respect for the
“ great talents and varied attainments of the distinguished
“ philosopher, upon whom this mark of honour has been
“ conferred. If I regard him as occupied with the highest
“ and most important practical duties connected with our
“ system of academical education, and in providing and
“ arranging the materials by which it is conducted, or the
“ principles upon which it should be based, he will be
“ found in the foremost rank of those whose labours do

“ not deserve the less honour, because they commonly
“ absorb the entire time and attention of those who are
“ engaged in them; and thus close up the avenue to those
“ distinctions which are almost exclusively confined to
“ great discoveries in science, or to important productions
“ in literature. When I read his essays on the architec-
“ ture of the middle ages, on subjects of general litera-
“ ture, or on moral and metaphysical philosophy, exhibiting
“ powers of mind so various in their application and so
“ refined and cultivated in their character, I feel inclined
“ to forget the profound historian of science in the accom-
“ plished man of letters or the learned amateur of art;
“ but it is in his last and highest vocation, whilst tracing
“ the causes which have advanced or checked the progress
“ of the inductive sciences, from the first dawn of philo-
“ sophy in Greece to their development in the nineteenth
“ century; or in pointing out the marks of design of an All-
“ wise and All-powerful Providence in the greatest of
“ those works and operations of nature, which our senses
“ or our knowledge can comprehend or explain, that I
“ recognise the productions of one of those superior minds,
“ which are accustomed to exercise a powerful and lasting
“ influence upon the intellectual character and specula-
“ tions of the age in which they flourish.

“ It is now three years since the royal medal was ad-
“ judged to Mr. Lubbock for his *Researches on Tides*; and
“ the Council have availed themselves of the first oppor-
“ tunity which was presented, by the recurrence of the
“ cycle of the subjects which are successively entitled to
“ the royal medals, to make a similar award to his col-
“ league and fellow-labourer in this very interesting and
“ important series of investigation. It is not for me to

“ attempt to balance the relative claims and merits, in
“ connexion with this subject, of these two very eminent
“ philosophers; it is quite sufficient to remark, that the
“ first who ventured to approach this difficult and long
“ neglected inquiry was the first also who was selected for
“ honour; but I have long noticed, with equal pride and
“ satisfaction, the perfect harmony with which they have
“ carried on their co-ordinate labours, apparently indiffe-
“ rent to every object but the attainment of truth; and
“ altogether superior to those jealousies which too fre-
“ quently present themselves amongst rival and contem-
“ poraneous labourers in the same departments of science.

“ Those who have attended to the Tidal Researches of
“ Mr. Whewell, must be aware how much light has been
“ thrown upon the character and course of the phenomena
“ of the tides by the simultaneous observations, under his
“ instructions, which were made in the month of June,
“ 1834 and 1835, at nearly five hundred stations of the
“ Coast Guard Service in Great Britain and Ireland; and
“ simultaneously with the latter also at more than one
“ hundred stations in America, Spain, Portugal, France,
“ Belgium, Holland, Denmark, and Norway. These ob-
“ servations were undertaken by the authority and through
“ the influence of the Government of this country, which
“ likewise most promptly and liberally furnished the re-
“ quisite funds and assistance for reducing the Observations
“ in such a manner as was requisite for deducing general
“ conclusions from them; a labour much too extensive and
“ costly to be undertaken by any single individual.

“ I gladly seize this opportunity of bearing testimony,
“ occupying as I do the highest scientific station in this
“ country, to the readiness which the Lords of the Trea-

“ sury and the Admiralty have shown on this and on
“ every other occasion to forward scientific inquiries, and
“ particularly such as are connected with the advancement
“ of astronomy and navigation. They have granted funds
“ for reducing and publishing the Planetary Observations
“ at Greenwich, the valuable and extensive series of Ob-
“ servations of the late Mr. Groombridge, for repeating,
“ on an adequate scale, the very important experiments of
“ Mr. Cavendish, and for many other subjects of great
“ scientific interest and value; and I feel satisfied that
“ every application for assistance towards the accomplish-
“ ment of any important object in science, will receive
“ from them the most willing attention and support, if it
“ comes before them with the recommendation and autho-
“ rity of those persons who are most competent to judge
“ of its usefulness or necessity, and in such a form as
“ may justify them in appealing to Parliament for its
“ sanction of the requisite expenditure. I rejoice, Gen-
“ tlemen, in such manifestations of the sympathy of the
“ Government of this great country for the progress of
“ science; and I trust that its influence will be felt in
“ the cordial union and co-operation of philosophers in
“ planning and in executing those great systems of Ob-
“ servations, whether simultaneous or not, which are still
“ requisite to fill up some of those blank spaces which
“ occupy so large a portion in the map of human know-
“ ledge.”

It may be here stated, that this country has ever been desirous to encourage a mutual exchange of knowledge with other countries in objects of science.

The friends of Professor Bowditch being desirous that

he should be made an Honorary Member of the Royal Society, I communicated the testimonials which had been transmitted to me, to Sir Joseph Banks, the late President. He was pleased to state, that he thought that Professor Bowditch would be a very proper person for the honour; and after taking down, at his request, the form of the certificate required, he stated that he would sign it himself, and get some of the Council to do the same; he then returned it to me for my signature. Mr. Bowditch was duly elected, and I afterwards took similar measures to procure his election as an Honorary Member of the Royal Societies of Edinburgh and Dublin with success.*

The Commissioners of the Public Records have been pleased, with great liberality, to present sets of their Reports to some of the public bodies and institutions of different States of the United States.

* I regret to state that society has met with a great loss in the death of Professor Bowditch, at Boston, aged 65 years; and having early obtained an interesting Memoir of his Life, delivered by the Rev. Alexander Young, an Eulogium by Judge White, and a Memoir by Mr. Pickering, on the occasion of his death, in March, 1838, I transmitted the same to the Council of the Royal Society.

It may be further stated that the family of Dr. Bowditch has appropriated his valuable library to the use of the public. It contains a large collection of philosophical and scientific works. The family has likewise given up the use of the apartments for it in the house in which they lived at Boston, to favour those objects; and it is hoped that those Societies in Europe, which have presented him with their Transactions, will be induced to continue them to the Bowditch Library.

The Duke of Sussex, in his Address to the Royal Society, on the 30th November, 1838, paid a high tribute to the talents and acquirements of this distinguished philosopher.

It is owing to the zeal and activity of my brother, John Vaughan, Esq., of Philadelphia, well known and much respected, and Treasurer of the American Philosophical Society, that I have been enabled to negotiate exchanges or presents of the Philosophical Transactions of the Royal and other Societies in this country and on the continent, with the American and other societies and literary men of America, which has tended to strengthen the union of science and good feeling between the two countries.

It may be interesting to my friends to state here that my youngest brother, the late Samuel Vaughan, Esq., of Jamaica, of which island he was many years a resident, was for some time Member of the Assembly, and for a number of years an Assistant Judge of the Grand Court and Custos Rotulorum of the Parish of St James. During the period of his holding these offices, and, indeed, while he resided in the island, he, both publicly and privately, exerted himself for the gradual amelioration of the negro population, and not without a beneficial effect. He also wrote some interesting, able, and conciliatory papers "in defence of the Colonies," rebutting and refuting many of the aspersions and calumnies thrown out against them. He died in that island in 1827, much respected and regretted.

Whilst John W. Lubbock, Esq. and Professor Whewell were communicating their discoveries and observations on tides, Professor Hassler, with whom I had been long acquainted, transmitted to me some copies of observations which he had made on the tides and coasts of America, by order of the American Government, and with it a report upon weights and measures, which I distributed to the Royal Society and other bodies and scientific persons. I

obtained a complete set of all his reports, and I transmitted them to Captain Beaufort, Hydrographer to the Admiralty, at his request. He received them with pleasure, and wrote a letter himself to Professor Hassler, which I forwarded. Mr. Hassler transmitted a copy of the same to the American Navy Board at Washington; it was published in the American Globe, a Government paper, and afterwards in the John Bull of the 28th of January, 1838; and I with pleasure give a copy of it, as follows:—

Admiralty, 6th July, 1837.

“DEAR SIR,

“I have to acknowledge, with many thanks, the receipt
“of your very valuable work on Weights and Measures,
“and also of your correspondence on the Coast Survey.

“The Lords of the Admiralty have commanded me to
“thank you on their part also; and their Lordships, the
“public, and all the men of science in the country
“heartily join with me, in the earnest wish that the pre-
“liminary correspondence will have so completely cleared
“away all official difficulties, that you will be now able to
“advance with rapid strides that great and laborious, but
“unspeakably important enterprise which the Government
“of the United States have so judiciously confided to
“your management.

“That the Government may now effectually support
“your efforts, and that your health may be equal to the
“various and constant demands upon it, are the sincere
“wishes of,

“Yours, faithfully,

(Signed) “F. BEAUFORT.”

MISSIONARY SOCIETIES.

[Continued from p. 66,]

In closing the hints and sketches on various subjects in the preceding pages, it may not be uninteresting to take a summary view of what England was in former ages, compared with what it is in its present state. England at one period, as well as Europe, was almost uncultivated and uncivilized, and they have required centuries to make them what they are. They have had their convulsions, wars, revolutions, and reformatations ; and have been under feudal and other systems.

Civilization and liberty had been for ages little understood, and may be compared to wild plants that require the hand of cultivation. England was amongst the first countries that began to improve ; and among other causes, it was to Alfred that we were indebted for Trial by Jury, which secured rights and property, and formed one of the great pillars of our constitution.

The introduction of Christianity also caused a great revolution and improvement in our morals, customs, and habits. The BIBLE is now to be found in all churches, schools, and seminaries, and generally in all families. It inculcated moral and religious habits, and promoted the objects of civilization and the best rules for our conduct in life. It has taught us contentment, and is our best consolation in times of distress, age and infirmity, and holds out brighter prospects in a future state. In England, attention is generally paid to an early education in all classes of society, and to the encouragement of public and private virtue throughout the country.

There have been few countries that have taken so deep

an interest in the printing, translating and circulating the Bible and New Testament to all parts of the globe as England. By means of the New England Corporation for the civilization and conversion of the Indians in North America, founded in 1661;* the Society for promoting Christian Knowledge, founded in 1698, and the Society for the propagation of the Gospel in Foreign Parts, founded in 1701; the Moravian Society; the British and Foreign Bible Society, and by Missionary Societies of all denominations; the BIBLE has been translated by them into very many languages, and distributed extensively; particularly in the East Indies and amongst the many clusters of Islands in the South Seas, as well as in New Holland, Van Diemen's Land, China, America, Athens, Arabia, Africa, &c., many of them having printing-presses; and in Ireland the circulation of the Bible is becoming more extensive.

It will be found by experience, that giving Missionaries the best education, with a knowledge of the language, manners and customs of the countries they visit, will with the aid of artizans, and a knowledge of medicine, best promote the objects in view; and that Missionaries with wives and children will be found calculated greatly to promote civilization in the world. All these Societies expend on these objects about £500,000 per annum; to which may be added £50,000 per annum expended by similar Societies in America for sending Missionaries to Africa, Persia, China, Greece, Arabia, and other countries

* The celebrated Robert Boyle was the first Governor of this Corporation, and was equally zealous for the promotion of Christianity in different parts of the world.

in the East, and to the back parts of the United States, with Missionary printing-presses, &c.

The reign of George III. is another important event in the history of this country. Amongst many of the advantages in this reign have been voyages for discovery and science, and we are now beginning to reap their happy results. And the Islands in the South Seas, Australia, Van Diemen's Land, and others, are rising in population, civilization, and commerce; and if the discovery of America has produced great events, similar results will, it is hoped, be produced by the discovery and settlements of the Islands in the Southern Hemisphere and New South Wales. Almost all the islands have been visited by navigators, whalers, and Missionaries. The Americans are carrying on an extensive trade in this hemisphere, and there is no knowing how great may be the result of things in these quarters within the next century. Sydney, in New South Wales, which was first made a refuge for convicts, is now becoming a seat of commerce, emigration, civilization and education; and Van Diemen's Land and other parts of Australia are now rising into importance.

If England thought it good policy to transport its convicts to New South Wales, which operation has been partly increased by the mitigated punishment of transportation instead of death; it will on the other hand be found that many convicts have carried with them their idle and vicious habits, and require the strong hand of power to govern them, as well as religious and moral instruction to humanize and reform them. They form the worst class of persons for colonization, and many of them have taken up a system of piracy, which is fast gaining ground in

Australasia and Polynesia. But it is hoped, that from the great extent of the emigration of free settlers, with their wives and children, and from the recent determination of Government, to discontinue the transportation of convicts to those countries as soon as possible, and an extension of schools, that the religious and moral state of society will soon be greatly improved in that quarter of the world.

No. 8.

RUSSIAN CORRESPONDENCE.

[Continued from p. 41.]

From the Rev. James Smirnove, Chaplain of the Russian Legation, &c. &c. to William Vaughan, Esq. London.

December 1st, 1802.

SIR,

Some time after I had the honour to visit the West-India Docks and to dine with you last year, having observed the great wish which you had expressed to procure plans of some of the Russian Canals, I wrote to his Excellency Admiral Mordwinoff, Vice-President of the Imperial Admiralty, respecting your desire; and his Excellency having mentioned it to the Emperor, his Imperial Majesty was pleased to order that a Plan of the Canal at Cronstadt, and also an hydraulic Map of Russia, expressing all the Canals which are already executed, and all those which are only projected or intended for execution, should be transmitted to you.*

* This hydrographic map is in a mahogany case, with the following inscription:—

Hydrographical map of Russia and the Docks at Cronstadt,

Presented by

HIS IMPERIAL MAJESTY ALEXANDER THE FIRST

TO WILLIAM VAUGHAN, ESQ.

1802.

At the foot of the map is attached the correspondence, with explanations of the Russian characters in English.

Having lately received them from his Excellency Admiral Mordwinoff, I take the liberty herewith to transmit them to you; and I feel myself extremely happy, Sir, to have had it in my power to do an agreeable thing to a person of so distinguished merit, and who has employed so much zeal and talent for the good of commerce and the public welfare.

I have the honour to be, with great regard,

SIR,

Your most obedient humble servant,

JAMES SMIRNOVE.

THE ANSWER.

London, February 3d, 1803.

DEAR SIR,

The loss of my father, and an attention to family concerns, prevented my returning you my thanks as soon as I could have wished for your great readiness in promoting my wishes in procuring the Plans of the Canals of Russia; I feel myself not only greatly indebted to your kindness, but much honoured by the gracious manner with which the Plans of the Canal at Cronstadt and the Hydraulic Map of Russia, denoting the Canals of that country made, executing, and in contemplation, have been conveyed to me through you by his Excellency Admiral Mordwinoff, Vice-President of the Imperial Admiralty, at the command of his Imperial Majesty of all the Russias.

I beg you will convey, through his Excellency, my most respectful thanks and acknowledgements to his Im-

perial Majesty for the same, with the assurance that I esteem them as being a valuable acquisition to the collection of documents on Canals and Docks, which I have been making for some years, in order to accomplish objects I have had much at heart; and you will much oblige me by requesting the Emperor and his Excellency to honour me by their acceptance of some Tracts favourable to the formation of Docks and of a Free-Trade.

The plan for forming Canals in Russia, and of uniting by them its great rivers with its great outlets, is truly princely and worthy the adoption of a great nation. Friendly to internal improvement, I have always viewed with pleasure the growing objects that promoted them, from their happy tendency to call forth into activity that industry which contributes by pacific means to the comforts and happiness of society; and nothing tends perhaps so much to change the face of a country, or the manners of its people, as the effects produced by canals, good roads, and railways, which so greatly facilitate the means of supplying the wants they create. I hope as all countries advance in countenancing national industry, and as their external wants increase, commerce may cement their union by a pacific system that may prove happy and beneficial to them all.

With the sincere wish that England and Russia may ever retain such an intercourse, I beg to subscribe myself, with great regard,

DEAR SIR,

Your most obedient humble servant,

WM. VAUGHAN.

From Vice-Admiral Chichagoff, Vice-President of the Imperial Admiralty, to William Vaughan, Esq. London.

St. Petersburg,

October 30th, 1803.

SIR,

Having laid before his Imperial Majesty the Books and Plans which you sent of the London-Docks, I have the honour to acquaint you with his Majesty's gracious reception and approbation of them; as a testimony of which, his Majesty has been pleased to send you a diamond ring, which you will receive with this letter from the Reverend James Smirnové. It is with particular pleasure that I communicate it to you, and I have the honour to remain,

SIR,

Your most obedient humble servant,

P. CHICHAGOFF.

THE ANSWER.

London,

December, 17th, 1803.

SIR,

I have been honoured with your Excellency's letter of the 30th October, informing me that his Imperial Majesty the Emperor of All the Russias has been pleased to accept of my collection of Tracts upon Docks and Free-Trade; and that he had also graciously condescended to notice my endeavours on these subjects by directing an elegant

diamond ring to be presented to me, which I have received through the Rev. Mr. Smirnov.

I beg you will lay before his Imperial Majesty my most grateful acknowledgments, for this distinguished mark of his approbation of the exertions of a private individual in a foreign country, for the promotion of objects of general utility ; and I am persuaded that I am indebted for his Majesty's notice and kindness for the Maps of the Canals of Russia and Cronstadt, and for this fresh instance of his condescension, to the liberality of his own princely spirit, and to his feeling so lively an interest in what tends to promote the happiness and welfare of society.

If I should be induced to think more favourably of my labours than I have done, it will be from the public having sanctioned the Plans by their adoption, and from their having attracted the notice of the enlightened Sovereign of a Great Empire. Permit me to return you my sincere acknowledgements for the handsome manner in which you have conveyed his Majesty's pleasure.

I am, with great respect,

SIR,

Your Excellency's most obliged
and obedient humble servant,

WM. VAUGHAN.

His Excellency,

Vice-Admiral Chichagoff,

§c. §c. §c.

St. Petersburg.

ERRATA.

Page 29, line 10, read an Entrance at Shadwell instead of a Cut at Bell Dock.

Page 39, line 16, read Captain Walton instead of Mr. Pearce.

R E A S O N S

IN FAVOUR OF

THE

L O N D O N - D O C K S.

LONDON, 1795.

THE LONDON-DOCKS.

THE Merchants of London have recommended to the public the forming of Wet Docks in Wapping, for the reception of 400 Sail of loaded ships, when all are completed; and a Lighter-Dock, capable of holding 30 Lighters every tide. They are now applying to Parliament for leave to make the same; and, in order to give a fair discussion to all parties and all interests, it is intended that the Bill shall be read once, and printed, and then to lay over until the next sessions.

The following are reasons why mercantile and city interests should join in the application.

1. From the great increase of Commerce, Shipping, and Revenue, for the Port of London, compared with former periods or with the rest of England.*

2. That the RIVER is not adequate to the reception of the Shipping that frequent the Port. Navigation is frequently impeded, and the losses, damages, accidents, and plunderage, that Shipping and Merchandize annually sustain, will not fall short, on a moderate computation, of 2 or 300,000/. per annum.

3. That the LEGAL QUAYS are the same in extent as at the fire of London, in 1666, being limited to between London-Bridge and the Tower, and are about 1464 feet long; while those of Bristol are above 4000 feet. They are limited in

* The first has, within this century, nearly trebled itself, as to value of Import and Export, and forms above three-fifths of the Trade of all England.

The second, as to the Number of Ships from foreign Parts, has nearly doubled itself; and as to Tonnage, nearly trebled; independent of a very great increase in the Coasting-Trade.

The third has also rapidly increased; and the payment of Customs for the Port of London, either in groce or in neat amount, and are, according to Public Documents, nearly treble of that for all England.

their powers of improvement or extension, and do not accommodate *one-fourth* of the Commerce of the Port of London in bulk, while the Port itself enjoys three-fifths of the trade of all England in value.*

The avenues also to the Legal Quays are too few, too steep, and too narrow. Out of the ten in number, there are only two great outlets; the others being impassible or little frequented. Scarce a day passes without great stoppages in one of the most principal thoroughfares of the metropolis over London-Bridge, occasioned by the crowded state of the Legal Quays, &c.

4. That many branches of Commerce have been thrown off from the Legal Quays to the Sufferance-Wharfs, such as rice, hemp, flax, pitch, tar, &c. and, even of those articles which have been retained, wharfingers have been frequently obliged to reship or cart away Merchandizes immediately from the King's Beam to other spots, at their own expence, and with additional risk and trouble.

5. That the *Sufferance-Wharfs*, which are mostly out of the jurisdiction of the City, and are dispersed up and down the river as low as Blackwall, are inadequate to wants, and many are ill accommodated for general Merchandize, either for convenience, situation, or safety; and are often exposed to sun, rain, or fire. This last has been so frequent and extensive within these few years as to become an evil of the first magnitude; and, in three fires, near one million of property has been sacrificed.

6. That Merchandize in *Lighters and Craft*, in its transit from the Ship to the place of landing, often sustains more damage than during the Voyage. Lighters and Craft are mostly open, and the goods exposed to every kind of weather, plunderage, and accidents, during all the delays and impediments for a month or six weeks before goods are landed. By thus making Lighters *floating Warehouses*, Commerce is laid under a heavy contribution that is destructive to property, detrimental to Revenue, and a hardship and delay to an active and laborious class of Lightermen, whose little multiplied voyages would be doubled and quadrupled, if they themselves could meet with more dispatch.

* The Number of Ships, great and small, that can lay afloat at low water, at the regular Mooring-Tiers, from London-Bridge to Deptford, are under 800 sail. Coasters, and Vessels that ground every tide, are not included in this number. In 1792, above 13,300 Vessels arrived in the Port of London.

7. That these great delays and losses in the River, and the great insecurity to Shipping in times of Frost, call for the most speedy and effectual redress, independent of seizures frequently made on Goods duly entered but not landed within the time limited by law, from the want of accommodations in the River and of landing, and not from neglect and needless delays.

8. That London, from its consumption and great increase of foreign and domestic Commerce, commands a Trade unrivalled in most Kingdoms; and, in proportion to the extent of it, has the worst accommodations of any Trading-Port; and unless some measures are taken to increase Dispatch and lessen Port-Charges and other evils, Commerce will be farther driven to Out-Ports, and perhaps to foreign parts, without the powers of recall, when most of the European powers are becoming the Patrons of Commerce as the Parent of Naval Strength and a Source of Revenue.

9. That the Out-Ports, from their great dispatch and enterprize in business, from their Docks, and vicinity to Canals and Manufacturing Towns, are greatly indebted for their present and increasing prosperity, and are, to a degree, becoming the little rivals of the great Metropolis. The value of the whole of their imports and exports have increased nearly four fold, within this century, on their former Trade; while that for the Port of London, for want of these advantages, have not increased three fold, and carries on its Shipping and Commerce under the heaviest incumbrances of delays, expence, and losses.

10. That the great source of these Evils proceed from the *want of room and dispatch*. The removal of 300 or 400 Ships out of the River, with their attendant craft, (which take up double room to unload them,) would prevent a number of those evils; and by giving convenience to Commerce, safety to Shipping, and security to Revenue, it would preserve and extend to the Port of London many of its natural advantages.

11. That, from the commercial and political state of Europe, London never had a fairer opportunity, by the creation of Docks and accommodations to Trade, of becoming the great magazine of Corn and other Merchandize for all Europe, than in the present juncture, and without a rival. Holland, Ostend, and Hamburg, are living proofs how far the principles of a Free Trade have prospered or decreased, according to political events; but London, from its insular situation

situation and other causes, will have little to fear beyond the discouragements of its own Port-Charges, and its own delays.

12. That the London-Dock, from its being so near the centre of Trade, and *about a quarter of a mile* from the Tower, will not only secure to the City for posterity, a number of its present advantages, but increase the means of extension; and those advantages will be still farther increased, in proportion as Inland Navigations form junctions with Docks. The Public are also alive to the necessity and want of Docks; and it is an object of consideration, whether the City will have to contend with the Plan of the London-Dock, or with others that have been in agitation; that will, if accomplished, draw after them Trades, Professions, and Towns, to more distant parts, that cannot be recalled.

13. That to the objections stated of,

1st, The infringement of City Rights.

2dly, The injury to City Revenues.

3dly, The removal of Commerce out of the City.

4thly, The deeply affecting the interests, prosperity, and employments, of various classes of Hands and Citizens, employed and maintained at the Legal Quays, &c.

It may be stated, that the Docks will not infringe on City Rights, they may be left as they are found. Ships in Dock can discharge their Cargoes into Craft, and send them to the Legal Quays, in the same manner as if they had laid in the River, with more œconomy and dispatch, and with fewer injuries and losses to the Public Revenue, to Commerce, and to Wharfingers themselves. For the greater convenience, a Lighter-Dock will be made, capable of holding from 26 to 30 Lighters, to go in and out of Dock every Tide. The Legal Quays will also farther always command a preference from vicinity and situation, and may be compared to a beehive that has strength to throw off its swarms without injury to the common stock.

That the City Revenues from Commerce, are small and limited, and may be collected and secured in the same manner as heretofore.

That the City cannot accommodate the Commerce of the Port, and that Sufferance-Wharfs are now become, from habit and necessity, as much the Legal Quays for the Port of London, as those within the jurisdiction of the City.

That the right of shipping and landing Goods is not vested in the City, but in Government and the Legislature,
for

for the objects of Revenue. They are authorized to make or increase Legal Quays and Sufferance-Wharfs, and it is under *their jurisdiction* that the present Legal Quays are constituted and derive their power, it being a compact between Commerce and the Revenue to land wherever it may be done with convenience to the one, and security to the other.

That the parties immediately affected are, comparatively few,* either in classes or numbers; and it is much better for the interests of Revenue and convenience to Commerce even to purchase rights, satisfy injuries, or grant annuities, than to suffer depredations and oppressions that are annually great, and that are detrimental to Property, and a discredit to the Port.

14. That the City of London has, at a great expence, made many improvements for ornament and convenience without emolument or profit, and has just applied to Parliament for the removal of Temple-Bar, &c. for the more convenient entry into the City, at the expence of £100,000, without any

* The following are some of the principal leading Interests :

PRIVATE INTERESTS.

The *Legal Quays* are twenty-one in number, are freehold, and mostly private property. The Owners are few, and most of them unconnected with the City, by habits, residence, or business, farther than by the collection of rents.

The *Wharfingers*, who possess a leasehold estate on high rents, created by necessity and competition, and who cannot be hurt by compensation for loss of privileges, or by new leases on other terms.

The *Gangsmen and Porters*, who are a useful set of men, and enjoy places of trust and confidence, and mostly for life. Their numbers are few, and about fifty; exclusive of men employed on about five Quays, who employ those that are not on the same footing as Gangsmen on the other Legal Quays.

Labourers are a fluctuating class of men, employed by the job or half-hour; and who are, as to the City, mostly aliens and strangers; being principally furnished by Soldiers from the Tower, and who would sustain no injury by working either at the Docks or at the Legal Quays.

Carmen are a class of men that would be rather benefited than injured by any change; and their numbers are limited to 420 Carts.

Lightermen and Watermen. As the Docks would take the overflows of Commerce which the River and Quays cannot accommodate, this class of men would be little injured. There would be employment enough for all, and their prosperity would depend more on the increase and dispatch of Commerce than from the delays and hardships which they at present labour under.

PUBLIC INTERESTS.

City and Commercial Interests will be promoted and increased, by every attention to convenience, safety, and dispatch to Trade.

Shipping-Interests will be benefited by the great security that Docks will give to Ships when the River is crowded, or affected by Frosts.

And the Revenue, from the safety and convenience given to Commerce, will meet with protection and increase.

return

return beyond that of a general improvement. It is hoped that the City will, with a becoming spirit, join mercantile interests in behalf of another plan, of infinitely more magnitude, that will not only furnish ample means of defraying its own expences, but restore the credit of the Port, by giving convenience and safety adequate to the wants and accommodations of Commerce.

The above hints are submitted with candor, and without intending disrespect to any Class of Men in the various branches of Commerce; but attributing the evils to one great source, the great increase of Commerce and the want of accommodations within the Port of London.

London, April 21, 1795.

T H E E N D.





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